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THE FUTURE OF OTOLARYNGOLOGY *

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CHICAGO

From the title of my address it might be assumed that I have been able by some magic influence to cast my eyes far ahead; that I have the great secret here transcribed, and that I am about to admit you into my confidence. If you will follow me, however, into the future, you will note that I am only judging it by my personal experience and observations, since I entered the practice of medicine exactly twenty-five years ago.

I have found it desirable to make two subdivisions of my subject: (1) development of an otolaryngologist, and (2) cooperation in otolaryngology.

DEVELOPMENT OF THE OTOLARYNGOLOGIST

A review of the history of the development of otolaryngology as a specialty would add considerable to the value of my presentation; but, for lack of time and space, it must be omitted. I wish, however, to say that we are much indebted to the pioneers, who have made it possible for those who followed to develop the branch into a real specialty. Yet, however great has been this development in the last twenty-five years, which many of us should feel it a great privilege to have witnessed, I believe we are at a threshold of even a greater step forward, namely, its recognition as a borderline specialty.

To meet the great demand for specialists, a number of graduate schools have made it possible for men to become operating or treating otolaryngologists, after a very short and inadequate course, and certainly without basic instruction.

Nothing has done more harm to the medical profession and to otolaryngology in America, in particular, than this result of imperfect pedagogics. The by-word "six weeks specialists" has been coined to apply to such practitioners, and the country is riddled with men with such training, doing not only otolaryngologic work, but often ophthalmologic work as well.

Fortunately, there were a fair number of men trained abroad, especially in London, Paris, Vienna and Berlin, who organized societies that set up high standards; and through their influence, many of these prematurely created otolaryngologists sought and secured adequate training. Again, the same societies are at this moment intensely interested in the problems of future development of the American otolaryngologist, and a permanent committee is at work. Having the honor of being one of the members of this committee, and being personally very much interested in the subject, I desire to present a tentative plan for your consideration—a plan which is feasible and can be instituted immediately.

1. There should be organized a board of directors, selected from each of the five national otolaryngologic societies, namely, the American Otological Society; American Laryngological Association; American Laryngological, Rhinological and Otological Society; American Academy of Ophthalmology and Oto-Laryngology, and the Section on Laryngology, Otology and Rhinology of the American Medical Association.

Each society is to send five members, irrespective of having membership in one or more of the constituent societies.

2. This board of directors, having been selected somewhat in reference to geographic location, is to be divided into five sections: (*a*) East; (*b*) Middle West; (*c*) North; (*d*) South, and (*e*) Extreme West.

3. The division into the five sections is made to facilitate the work of the board throughout the year, as the board as a whole meets only once a year, preferably at the annual session of the American Medical Association.

4. The board of directors should have absolute control of the development of the otolaryngologist, acting as advisory both to the institutions of learning or training, and to the student. It should, furthermore, determine the fitness of the applicant for training as well as practice.

5. A student having satisfied the board of directors of his fitness to become an otolaryngologist, and having shown that in his undergraduate studies, as well as during his internship, he has given especial attention to this branch, as, for instance, seminar work or theses, etc., he is referred to a clinician, who will train him for one year. This corresponds to the second year of internship in a hospital.

It is assumed that the clinician has enough work for one or more such men, in order to give them the training and prepare them for the subsequent advanced study and development.

6. This advanced study or training should consist in a systematically carried out curriculum as prescribed by the board of directors.

A schematic schedule is herewith suggested:

1. Anatomy, normal and pathologic, of the nose and nasal accessory sinuses. From 10 to 12 (sixty hours) one month.

Use of wet, dry and microscopic specimens, including illustrations. The actual work for one such month's course may be thus exemplified:

A. Mornings: 1. Embryology and comparative anatomy of the nose and paranasal sinuses. Four hours.

2. Anatomy of the nose and paranasal sinuses from birth to adult life. Four hours.

* Chairman's address, read before the Section on Laryngology, Otology and Rhinology, at the Seventy-First Annual Session of the American Medical Association, New Orleans, April, 1920.

3. Anatomy of nose and paranasal sinuses in adult life. Eight hours.
4. Gross pathologic anatomy of nasal septum. Two hours.
5. Gross pathologic anatomy of middle and inferior turbinated body. Four hours.
6. Gross pathologic anatomy of the paranasal sinuses. Four hours.
7. Histologic pathologic anatomy of the septum, turbinates and paranasal sinuses.

2. Anatomy, normal and pathologic, of the pharynx, larynx, trachea, bronchi and esophagus. Wet and dry specimens, including microscopic slides and illustrations. From 2 to 4 (sixty hours) one month.

B. Afternoons: 8. Embryology and comparative anatomy of the pharynx, larynx, trachea, bronchi and esophagus. Four hours.
9. Anatomy of pharynx, larynx, trachea, bronchi and esophagus in children. Four hours.
10. Anatomy of pharynx, larynx, trachea, bronchi and esophagus in adults. Four hours.
11. Gross pathologic anatomy of pharynx, larynx, trachea, bronchi and esophagus. Four hours.
12. Histologic pathologic anatomy of pharynx, larynx, trachea, bronchi and esophagus. Four hours.

3. Anatomy, normal and pathologic, of the ear, including the mastoid process. From 10 to 12 (sixty hours) one month.
Use of wet, dry and microscopic specimens and illustrations.
4. Anatomy, normal and pathologic, of the brain ganglions and cranial nerves.
Use of preparations, gross and microscopic; also illustrations. From 2 to 4 (sixty hours) one month.
5. Diagnosis and surgical treatment, on the cadaver, of the nose and the nasal accessory sinuses. From 9 to 12 (eighty hours) one month.
6. Diagnosis and surgical treatment, on the cadaver, of ear, mastoid, brain and nerves. From 2 to 5 (eighty hours) one month.
7. Attendance in ambulatory clinic of ear, nose and throat, observation only. From 9 to 12 (eighty hours) one month.
8. Reports on work in the observation clinic in writing and illustrating with reading and reference to literature. From 2 to 5 (eighty hours) one month.
9. Ambulatory clinic, ear, nose and throat in a clinic service. From 9 to 12 (eighty hours) one month.
10. Report in writing and with illustrations, reading and reference to literature on work in the clinic. From 2 to 4 (sixty hours) one month.
11. Observation on surgical clinic in ear, nose and throat. From 9 to 12 (eighty hours) one month.
12. Report in writing with illustrations, reading and reference to literature of the work observed in the clinic. From 3 to 5 (sixty hours) one month.
13. Observation in major surgical clinic, especially head and neck surgery. From 9 to 12 (eighty hours) one month.
14. Report in writing and illustrations, reading and reference to the literature on work of that clinic. From 2 to 5 (eighty hours) one month.
15. Surgical clinic in ear, nose and throat in active surgical service. From 9 to 12 (eighty hours) one month.
16. Reports in writing with illustrations, reading and reference to literature, on the work performed at the clinic. From 2 to 5 (eighty hours) one month.

The important questions now to be answered are: Where is the student to get this instruction? How are they to be grouped? What financial arrangements will be necessary?

I stated at the outset that the plan was feasible and could be made use of immediately. Let me propose a trite example:

A student applies to the board of directors, let us say, from the Western Section (San Francisco). He will be informed by this board what credentials he must have. The board is in possession of the names of a number of clinicians, who have signified their willingness to take an applicant for a year. If the student has a preference and the preferred clinician is available, appointment is made accordingly. After one year of service with the clinician, he receives a certificate from the clinician signifying the type of work performed, and he again applies to the board for advanced work. He will be informed that he may choose Harvard University, Pennsylvania or any university giving the course. At completion of each particular course he will receive from the instructor a certificate of attendance with grade for the work done. The actual expense of such a training cannot be stated, because it will vary with the necessary traveling, etc.; but so far as the first year of the training with the clinician is concerned, the student should receive the same compensation as an intern at the hospital, namely, board and lodging. The cost of the advanced work should be that which each university will demand. It has been customary for the American universities to make the minimum charge for any instruction.

Having completed the prescribed number of courses satisfactorily, he will return to the annual meeting of the board of directors and receive his properly accredited diploma, and he will be recognized as a thoroughly trained otolaryngologist.

While the courses outlined are perhaps not actually available at this time, and they are not absolutely required for a year, I am sure that arrangements can soon be made for them, and the results will be all we could desire.

The most difficult courses to secure in this country are the practical surgical training on the living; and if I may be permitted, I would suggest that until the clinical material is sufficiently organized for this work, the student may be required to go abroad for this portion of the work. I was authorized to state, by the clinicians of the University of Prague-Czechoslovakia, that any one who has had the preliminary training and is recommended by proper medical authority will be given ample opportunity to work on the living at their clinic. It is also quite likely that other European clinics will be soon ready to receive American physicians.

Being in possession of a proper general introduction from the members of the board of directors, the student now makes a tour of observation for four months. A list of large otolaryngologic clinics should be sent to each student. The length of time he shall spend at each place is left somewhat to the judgment of the student. At the conclusion of each visit he is to make a brief and concise report of what he has seen and heard.

It has been considered that perhaps the outline of what I term advanced training should precede the one year of practical work with the clinician; but after I had discussed the matter with several pedagogues in otolaryngology, it was thought best to do as advised above. The reason for this is that the student, having observed for one year the difficulties actually encountered, will be more eager to learn details. Also the question of appreciating subsequent teachers, when he makes the observation tour, comes into play.

Having completed his training and received his recognition as an otolaryngologist, he has yet a great deal before him toward development. In fact, it never stops and one is continually learning. He will have to decide whether he shall enter the practice independently or in association with one or more men in practice.

Speaking from personal experience, I shall advise everybody to become an associate. I have trained men and women ever since I have been in the practice of otolaryngology, and with few exceptions, these have found places as associates and have been, I believe, success-

ful. Furthermore, every otolaryngologist should join his local and national otolaryngologic society, take part in discussions, and try to do, as often as possible, some accredited work, and thus promote the advance of our specialty and develop into a real otolaryngologist. So far as the otolaryngologist visiting his colleges at home or abroad is concerned, I desire to state that the organization of an international society at the next international congress would be advisable. Membership in such a society would be accorded to any recognized otolaryngologist in his respective country, designated by a membership card. There need be no officers, dues or other expenses connected with such an organization. A member of the society, presenting such a membership card, should be entitled to all the possible professional courtesies, and given every opportunity to learn what his friend and colleague is doing. The idea of such a society would be, no need of special letters, etc., of introduction, nor any hesitancy on the part of the visitor to seek information. Besides, men would aspire to the recognition of an otolaryngologist, and the pretender would be denied rare privileges.

COOPERATION OF THE OTOLARYNGOLOGIST

With the establishment of the various specialists, there has developed such an epidemic of so-called group medicine or team work all over this country, that I have thought wise to call your attention to the possibility of this practice to cause more harm than good when thus applied. That group medicine is one of the greatest factors in benefiting the people and furthering science, there is no question; but the group must be competent. What I am objecting to is the pretension group of so-called specialists combining for commercial reasons and causing a lot of trouble by making false diagnosis, unnecessary and poor operations; therefore, my suggestion and outline of conditions or diseases in which otolaryngologists and the other specialists are simultaneously concerned.

We may divide society grossly into three great classes: (1) the wealthy; (2) the middle class, and (3) the poor. The relative percentage of these classes varies considerably, depending on the location, concentration and character of the district. The medical problems of these classes are by no means solved. However, the wealthy do not suffer, for their pecuniary resources command the necessary skill required. The poor are usually provided for in most communities through the great hospitals, which attract men of the highest medical attainment, who give their services free and without stint.

Those who belong to the middle class are by no means so fortunate. They cannot conscientiously accept the charity which is offered the poor, nor have they the means to secure the service which they desire and which the wealthy receive. They are hence often denied the medical attention in the varied and comprehensive manner required in the practice of modern medicine.

The great factor of this situation is the degree to which medicine has been specialized. While this specialization has been at times greatly overdone and often misapplied, the significant fact still remains that medicine as well as medical practice must be subdivided if any degree of expertness or efficiency is to be achieved.

In addition to otolaryngology, the recognized special branches in the practice of medicine are: (1) general surgery; (2) orthopedic surgery; (3) internal medicine; (4) gynecology; (5) pediatrics; (6) neurology and psychiatry; (7) dermatology; (8) obstetrics; (9) ophthalmology; (10) genito-urinary diseases; (11) clinical laboratory, and (12) dentistry. Naturally, there is a great deal of overlapping in the work of these specialties, and many questions as to the best interests of the patient frequently arise. Furthermore, this condition of things is not always successful in getting the best values—to use a colloquial term—out of the physician's work. A study of these circumstances has convinced me that there is still much to be done before these enforced divisions of medicine can become sufficiently harmonized to be brought into a proper relation with one another.

Among the many relational questions that arise, one of the most difficult is to determine to which of the specialists the patient belongs, with respect to treatment. In other words, when shall a skin and venereal specialist treat a syphilitic nasal or throat case, and vice versa? My answer is, "Whoever knows most about the subject." Surely the skin and venereal specialist should be the man in charge, because no matter how well the local treatment is carried out, the patient will not recover unless his general specific medication is given in the most efficient manner. Yet if that patient has a laryngeal stenosis or a nasal sequestrum, he will require the service of a well-trained rhinologist and laryngologist to help him.

What, then, is the answer? Cooperation. I realize that there are other facts which must be considered, as the ability of a patient to pay the fees of two or more specialists instead of one, and the financial loss to the one who refers. Both these can be overcome. The former can be met by charging only one fee, except perhaps for the initial examination.

Financial loss cannot be considered when the patient's well-being is concerned; however, mutual reference of cases more than compensates for this. Furthermore, the practice of medicine in the future, in furtherance of the interest of humanity, will make the necessary adjustments in this regard to meet this situation.

1. *General Surgery.*—Considered regionally, this may be subdivided into: (*a*) oral and maxillofacial surgery; (*b*) brain surgery; (*c*) neck surgery; (*d*) chest surgery, and (*e*) abdominal surgery. In the first three divisions, otolaryngologists are called on to treat most of the borderline conditions. I have for over fifteen years published articles setting forth the reasons why that should be so, and I have considered that upper and lower jaw diseases, as osteitis, fractures and dislocations and tumors, are properly in the domain of the otolaryngologist. The various plastic reconstructions for congenital conditions, as cleft palate and harelip, or for those due to the loss of substances from disease and injury about the head and neck, are and have been well managed by the otolaryngologist.

Brain surgery is and has been a function of otolaryngologists for a great many years, by reason of the fact that three important surgical conditions follow as complications of suppurative ear and sinus diseases. I refer to septic sinus thrombosis, meningitis and brain abscess. The result of this is that the otolaryngologist performs many brain operations following his diagnosis, and he is correspondingly entitled to undertake the surgical treatment of tumors and other intracranial affections, such as gasserian ganglion

disease, meningocele, hydrocephalus, microcephalus and oxycephalus, as well as other ventricular conditions.

Several neck operations have for some time come under the dominion of the laryngologist, such as tracheotomy, laryngectomy and laryngostomy, as well as jugular vein and carotid artery ligations.

The thyroid gland and other neck tumors, as well as the glands of the neck, are still more or less under the management of the general surgeon; yet there is no special reason for this, as the otolaryngologist is fully prepared to undertake this work.

In chest surgery, the otolaryngologist is much concerned in lung abscesses, especially from the etiologic standpoint. Since tonsillectomies are being performed in increasing numbers, especially in adults under general anesthesia, there have been reported a fair number of lung abscesses. In this particular, however, the general surgeon is better prepared than the laryngologist.

Foreign bodies in the bronchi and lungs entering by way of the upper respiratory tract are responsible for a goodly number of lung abscesses, due usually to failure to diagnose or to remove them by way of bronchoscopy.

In the mediastinum we are concerned in esophageal conditions, such as diverticula, foreign bodies, strictures, abscesses and tumors, all of which are and have been best treated by way of the upper or pharyngeal route, by the laryngologist who is skilled in bronchoscopy and esophagoscopy.

The otolaryngologist comes in to relation with abdominal surgery in connection with the diagnosis and treatment of such conditions as gastric and duodenal ulcers and appendicitis, in which there may be a question of the source of a focal infection. It may even be impossible to determine whether one of these or a tonsil infection is the causal agent. In cases in which there is doubt, the tonsil operation which is attended with far less danger or discomfort should at least have the preference.

2. *Orthopedic Surgery.*—The orthopedic surgeons who recognize focal infection as responsible for many of the joint, muscle and tendon affections find it useful to have their cases analyzed with respect to the probable focus of the affection somewhere in the domain of the otologist and dentist. It is very discouraging, however, to note that orthopedists refer cases of bowlegs, clubfoot, ankylosis, etc., for operation on the tonsils.

3. *Internal Medicine.*—The cooperation of the otolaryngologist and internist is so important that I have found it necessary to have one associated constantly in the diagnosis of chronic septic or focal infection; it requires the most careful attention of the laryngologist and the internist to determine just where the most likely focus of the trouble lies. The disease classified as rheumatism, either arthritic, muscular or neural, is most frequently called into question, and there is no doubt that the proper attention to the infected tonsil, tooth, nasal accessory sinuses or middle ear is frequently followed by relief or cure.

It should not be forgotten that the internist, as well as the pediatrician or the orthopedist, sometimes errs in referring cases to the otolaryngologist for the removal of a septic focus. An instance of this sort was a case of alcoholic neuritis referred to me on the supposition that there was a focal basis in the tonsil. Kidney, heart and the vascular system are very frequently involved from a focal infection, and the best management is through cooperation of internist and otolaryngologist.

Disturbances of the intestinal tracts are so frequently responsible for symptoms referable to the nose, throat and ear that I believe the otolaryngologist frequently treats these conditions by mistake, when they should be under the charge of an internist.

Under the same category may be placed the questions of diet, constipation and conditions resulting from disorders of the gastro-intestinal tract. These are so much in evidence in the daily work of the internist that they are his by superior knowledge and practice. On the other hand, unless the internist is on his guard, he will find himself endeavoring to relieve suppurative ear disease with labyrinthine fistula by attention to the stomach and intestine, the apparent location of the symptoms.

The lower respiratory tract, the bronchi and lungs are so frequently dependent on diseases of the nose and throat, especially the nasal accessory sinuses, that the interest of the patient cannot best be conserved unless both internist and otolaryngologist cooperate. Recurrent tracheobronchitis, asthma and bronchorrhea are most interesting subjects in this connection, particularly asthma, which recent investigations tend to show dependent on sensitization by protein poison due to disturbed action of the glands of internal secretion.

This brings me to the next class of diseases in which the internist and otolaryngologist must cooperate. Although much burdened by speculation, there are no doubt many positive findings that show the importance of the rôle played by the glands of internal secretions. Symptoms referable to the ear, nose and throat are common accompaniments, and it behooves the otolaryngologist to be well informed, so that he may cooperate with the internist in all such disturbances. The internist should understand how readily the rhinologic surgeon can operate on the hypophysis through the nose and sphenoid sinus, which may save the patient's vision and life.

There are no doubt many other conditions in respect to which the internist and the otolaryngologist must cooperate, such as the various anemias and diabetes which produce sō many nose, throat and ear manifestations, which need not be particularized. It is easy in this connection for the otolaryngologist to err in the diagnosis. On the other hand, the internist may treat an anemia which is dependent on some nose, throat or ear infection as a chronic sinus or ear suppuration which he may think unimportant.

4. *Gynecology.*—The female genitalia, when diseased, may produce symptoms referable to the nose and throat. All are familiar with the swellings of the erectile or turbinate structures within the nose in cases of malposition, inflammation or fibroids of the uterus. Some laryngologists have been very sucessful in relieving dysmenorrhea by some slight cauterization of the anterior part of the septum nasi. I have called attention to the closer relation in chlorotic girls between infantile uterus and atrophic rhinitis. Grayson and others assert that a hypersensitive condition of the nose occurring during the honeymoon period may result from changes in the female generative organs.

5. *Pediatrics.*—The pediatrician and the otolaryngologist are very often associated, especially in acute

infectious disease, because the nose, throat and ear symptoms are so prominent and complications involving these organs are among the commonest and most serious results of the infections. While all well trained pediatricians recognize this, they hardly give them the attention they deserve. Thus, it is commonly observed that an acute otitis media or acute sinus affection is frequently allowed to extend into a subacute or chronic state without being properly attended. It is my belief that many chronic suppurative and nonsuppurative ear and sinus conditions result from the neglected or undiagnosed cases of sinus and ear infections in childhood.

Great strides have been made in recent years toward the establishment of the diagnosis of sinus disease in children, and for this reason there is less excuse for permitting these processes to continue into adult life, making a cure impossible or difficult.

Pediatricians and otolaryngologists, and even the laity, recognize the importance of the removal of tonsils and adenoid tissue, when diseased, and have been convinced of the remarkable improvement that follows proper removal. It must be admitted that there has been perhaps a bit of overenthusiasm along these lines. I mean that there is a disposition to hold the tonsils accountable before an exhaustive diagnosis of the condition has been made. If the operation does not clear up the condition, both the pediatrician and otolaryngologist may be inclined to hold the tonsillectomy at fault, when in reality a mistake in diagnosis was made.

6. *Neurology and Psychiatry.*—In my practice I see more cases presenting symptoms referable to the nervous system than to any other special branch. I have roughly estimated that 33 per cent. and at times 75 per cent. of all cases under treatment are more or less related to the nervous system. The most pronounced symptom is headache. The analysis of a headache is in my judgment the acme of perfection in diagnosis. The next in frequency is pain about the head and neck. It is often spoken of by the patient as headache. These symptoms are referable to disturbances of the gasserian and sphenopalatine ganglion and their branches.

As already mentioned, intracranial complications of sinus and ear suppurations, as well as brain tumors are very frequently the subject for discussion between the neurologist and the otolaryngologist. But of all the conditions in which the neurologist and the otolaryngologist come into relation, none is so important as disturbances of the organs of equilibrium. The work of Bárány and his followers has been so developed that an actual fusion of the two especial branches has taken place in the formation of what is known as "neurotology."

Neurologists, in the main, have not shown the interest in this work that it merits, whether because they do not take the trouble to study it or because they doubt empirically that it has any value. At any rate, only a few neurologists in the country have cooperated with otologists to the extent that is justified.

There are quite a number of conditions presumably of exclusive concern to the neurologist, as cerebral syphilis, tuberculous meningitis, general paresis, dementia praecox, epilepsy, and the various mental states as mania, melancholia, manic-depressive insanity and hysteria, in which the symptoms of dizziness and vertigo are present and in which the function of the cerebellum, stalk and semicircular canals should be studied.

7. *Dermatology.*—I have already mentioned that cooperation between the otolaryngologist and the skin and venereal disease specialist is essential. Syphilis, of course, is the most common disease in which both branches are concerned. Not until the Wassermann test came into use as a diagnostic measure, was it found how many syphilitic ear, nose and throat conditions there are; and, strange to say, there are still many cases in which there is a presumption of syphilis and in which a competent Wassermann reaction, either of the blood or the spinal fluid, is not made. I shall speak of the competence of the Wassermann test later, when I take up laboratory cooperation. I could spend a long time discussing examples of syphilitic conditions involving the nose, throat and ear, but it will suffice to say that in every possible case it will be well to cooperate with the dermatologist, especially in the general treatment. I find quite a number of otolaryngologists still refusing to employ arsphenamin, because intravenous medication is somewhat more difficult; and when they do employ it, they are not completely successful.

Lupus and epithelioma are frequently found in the regions of the nose and ear; and in this regard they require cooperation of the two specialists. Especially is this true at present when the therapy is mostly carried out by the aid of radium and the roentgen ray.

A very common and most difficult condition to treat is what we call eczema of the external auditory canal. I am confident that an incorrect diagnosis has often been made. I have one such case which I treated for four years as eczema. A dermatologist made the diagnosis of favus and treated it as such with a permanent cure in six weeks. While furunculosis, both of the external ear and vestibule of the nose, is fairly well treated by most otolaryngologists, the general subject of furunculosis is much more exhaustively studied by the dermatologist. The same can be said of the acne which at times involves the external nose and ear. The bacterial side of the question as well as therapy (vaccines) is important, and the dermatologists are much better qualified than the otolaryngologists in this subject at this time.

So many other rare skin lesions are found, also infrequently about the nose and ear, that I wish to lay special emphasis on the importance of cooperating with the dermatologist. On the other hand, I must express my surprise at the dermatologist who is treating frank nose and throat and even ear conditions without the cooperation of an otolaryngologist, just because he has made a Wassermann test and found it positive or even because the patient has other syphilitic lesions. I am sure that local treatment is entirely ignored. The wrong is twofold: first, a syphilitic patient may and does have a nonsyphilitic nose, throat and ear affection; and secondly, many syphilitic nose, throat and ear affections must have local treatment and even operations at times.

8. *Obstetrics.*—Otosclerosis is a condition which should concern the obstetrician, although it is of far less importance than ophthalmia neonatorum. The well known hereditary tendency of this disease, especially when both parents are affected, makes it an impor-

tant factor in the prophylaxis of deafness. Furthermore, during gestation, labor and lactation, deafness is greatly increased in the mother suffering from otosclerosis. I have had several cases of otosclerosis in pregnant women in whom in cooperation with the obstetrician we carried out the systematic treatment of hypodermic injections of epinephrin, the result being, apparently at least, prevention in increase of deafness. It was also hoped that this might prevent the evidence of otosclerosis in the child. I have already discussed this phase of the subject.[1]

The last two epidemics of influenza demonstrated that severe mastoid and sinus complications induced miscarriages in pregnancies of more than three months' duration; however, if pneumonia was present before the miscarriage, the woman usually succumbed.

Another question of great importance is whether or not a nose or throat operation should be performed on a pregnant woman. I feel it best to postpone all operations under the circumstances except those that are urgent. These have not been followed by untoward results in my own experience.

9. *Ophthalmology.*—The cooperation between ophthalmology and otolaryngology has been long established, first, because it has long been the custom of many physicians to associate the two specialties in their practice, and secondly, because the pathologic relation of the nose to the eye has been recognized for many years. During the last two decades, the dependence of many eye affections on the paranasal sinuses has been the subject of much study. While this was formerly fairly limited to the suppurative processes, it has now been extended to include the nonsuppurative conditions which, indeed, have been found of more prolific etiology in this respect than the former. Keratoconjunctivitis, iritis and uveitis are commonly found to be due to focal infections of the tonsils, sinuses, middle ear, mastoid and teeth.

Nystagmus is a symptom that pertains to both the eye and the ear, which makes it necessary to determine the origin. Paralysis of the various extrinsic muscles of the eye may be due and often is due to sinus or temporal bone infections. Likewise muscle imbalance may be due to sinus disease, and it is not uncommon to see a refractive error or latent hyperopia disappear only when the nasal or sinus trouble has been corrected.

10. *Genito-Urinary Diseases.*—Nephritis needs only to be mentioned. As we have considered it under the head of internal medicine, the genito-urinary system need be discussed only from the standpoint of the pelvis of the kidney, bladder and prostate gland. These may be the seat of a chronic septic infection, independent or secondary to a focus of infection in the upper respiratory tract. Some very striking results have been reported from attention to the prostate without treating the tonsil. In my own practice I have had a case of chronic cystitis of long duration promptly recover after tonsillectomy.

11. *Clinical Laboratory.*—This term I use to include radiology, serology, hematology, bacteriology, chemistry and micropathology. The man in charge of such a laboratory should be a physician, preferably an internist, and he should have a corps of technicians, at least two. The relation between the clinical laboratory and otolaryngology has really gone beyond the stage of cooperation, for practically every field of medicine has become dependent on the clinical laboratory for the basic understanding of diagnostic and therapeutic problems.

12. *Dentistry.*—Although dentistry has been a highly specialized branch of medicine which had what it arrogated to itself, the dignity of a profession in itself, it is fast becoming more and more attached to medicine. The mechanical requirements and accomplishments of the last fifty years carried it far away from its parent, medicine, and American dentistry has become famous by reason of the crown and bridge work, porcelain inlays and the like. It appears to be the function of dentistry to preserve the decayed teeth, stumps of roots, etc., and to supply their deficiencies by mechanical subterfuge. A great change, however, has come over the profession, as witnessed by the zealousness with which chronic apical infections are studied and the conspicuously energetic effort which is being manifested to remove every tooth or root which shows any evidence of being the seat of a focal infection.

All this has brought the dentist closer to the otolaryngologist, as these two must decide in the majority of cases just where the focal infection originates. The maxillary sinus has already furnished many points of contact, and it must remain a constant source of study for both from the etiologic and therapeutic standpoints. Impacted and infected wisdom teeth may cause a tonsillitis, generally unilateral, and their influence in peritonsillar abscess is now being made the subject of much study. Tinnitus and even reduction of hearing may depend on infected molars, removal of which causes the symptoms to subside. Orthodontia, which has accomplished much with and without the cooperation of the otolaryngologist, has still to answer a serious question. So far it has been available almost exclusively by the well-to-do. The poor have little chance to profit by its wonderful development.

CONCLUSION

While I advocate that every otolaryngologist should be well informed on all the other special branches of medicine in order to cooperate in diagnosis and treatment, it is only in the capacity of cooperator that he should consider his services and not supplant any other specialist.

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1. Beck, J. C.: Contribution to the Pathology and Treatment of Otosclerosis, Ann. Otol., Rhinol. & Laryngol. 21: 203, 1912.

Industrial Sickness Statistics.—In the past not much attention has been given to the need for facts concerning the sickness problems of industrial establishments. Cases of illness have to some extent been recorded, but not in such a way as to permit analysis with respect to sex, age, occupation and other important conditions of physical status and environment of the persons concerned. It may appear to some that sickness records are unnecessary for plants having sanitary work places and no injurious processes or occupational hazards. Such an attitude is unjustifiable without knowledge of the sickness rates prevailing in these establishments. Under excellent conditions of work it is still possible for the frequency and severity rates of illness to be above the normal expectancy as the result of bad housing or other wrong living conditions, in which instance it becomes the duty of the employer to extend his activities beyond the confines of his factory or mine or store and to cooperate with municipal authorities and civic associations to right the injurious conditions responsible for the excessive disability discovered.—*Pub. Health Rep.*, April 9, 1920.

SOME FALLACIES REGARDING NARCOTIC DRUG ADDICTION

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In plumbing the depths of narcotic drug addiction one must travel an uncharted course, with guides and landmarks very uncertain and at best most unreliable; but when these are aided and abetted by the unscrupulous and unworthy, as well as the financially interested, all must appreciate that the situation is made more complex and the solution of the problem rendered more difficult, if not actually impossible. Add to this opinions giving color to pathologic processes that do not exist, and confusion worse confounded must occur.

Drug addiction today is a public health problem, as it is a menace to the health, welfare and comfort of the public. The extent of drug addiction is problematic, but it may be indirectly inferred when one estimates the amount of opium and cocain consumed annually in this country.

How much of these narcotics would be ordinarily used by physicians or hospitals in a year? Surely not anywhere near the amount credited as imported annually. Then what becomes of this vast amount of these drugs? It is, of course, used by persons as a "tippling" habit.

CLASSIFICATION OF DRUG USERS

The habitual users of narcotic drugs may be divided into two general classes: (1) Those who suffer from a disease or ailment requiring the use of narcotic drugs, and (2) addicts—dope fiends—drug habitués: those who use narcotic drugs for the comfort these afford and solely by reason of an acquired habit. The Harrison Narcotic law (U. S. Supreme Court, Doremus and Webb cases) says that drugs may not be given to keep the users comfortable by maintaining their customary use.

Class 2 may be divided further:

(*a*) Correctional (underworld type).

(*b*) Mentally defective (the constitutionally inferior person or the individual with feeblemindedness).

(*c*) Social misfits (the person whose maladjustment does not permit him to conform to social customs).

(*d*) Fortuitous (the individual who has had an adequate reason for taking narcotics, but the reason has disappeared and the drug habit is continued because of the physical suffering which unaided deprivation brings).

Many addicts loathe their habit, but physically cannot break from it unaided. A number of addicts, especially those in class subdivision *a*, use the practice of drug indulgence in their jobs. In our experience in drug addiction in New York City we found that those in subdivisions *a* and *b* were mostly heroinists, while the morphinists were in *c* and *d*. The heroinist and morphinist have been thus differentiated by an outspoken physician: The morphinist has guts, while the heroinist has only bowels.

Bad associates and evil environments are the chief causes producing addiction among youthful habitués in this city. Of 7,464 cases observed from April 10, 1919, to Jan. 15, 1920, in the department of health clinic, 3.5 per cent. were morphinists, while 96.5 per cent were heroinists.

MAGNITUDE OF THE DRUG TRAFFIC

How much opium and coca are used annually in this country?

The magnitude of this traffic is indicated by these statistical facts:

For the fiscal year ended June 30, 1918, there were 233,491 registrants as required by the Harrison act. These included: physicians, 125,905; wholesale dealers, 831; dentists, 42,240; manufacturers, 888; veterinarians, 10,399; importers, 76; hospitals, etc., 3,799; educational, 138; retail dealers, 48,196 and miscellaneous, 258.

The average yearly consumption for the period 1910-1915 was 491,043 pounds, which at the price of $40 a pound for opium would make a total value of $18,841,720. The average consumption of coca leaves for the same period was 1,048,250 pounds. At the present retail price of $1 a pound this would represent approximately $20,000,000.

Illegitimate traffic is known to have increased enormously in recent years, and is a serious menace at the present time. It is through this channel that most of the addicts receive their supplies of narcotic drugs. It has been estimated that about 90 per cent. of the amount of opium and cocain entered for consumption is used for other than medical purposes. This may perhaps be an extreme view; yet when the consumption of opium in the United States is compared with that in other countries, we find that the per capita consumption here is from thirteen to seventy-two times as great as in other countries.

CONSUMPTION OF OPIUM IN VARIOUS COUNTRIES

Country	Consumption per Capita, Grains
Austria	½
Italy	1
Germany	2
Portugal	2½
France	3
Holland	3½
United States	36

The amount of cocain which can be produced from the leaves imported is approximately 150,000 ounces—sufficient for two and one-half doses for every person in the country. It is estimated that one fourth is used legitimately; 112,500 ounces of cocain are therefore used illicitly.

When this magnitude is considered carefully and scientifically, and it is known what a demoralizing, debasing effect such practice has, is it not a very serious matter to know that 80 per cent. of the addicts visiting the department of health clinic are young men and women just out of their teens?

The importance of securing more accurate information, particularly satistical, of the extent and growth of traffic in narcotic drugs in the different localities, especially in the large cities, is coming to be more keenly appreciated by all authorities, and in the near future it is hoped that the medical and pharmaceutical professions will be able to furnish data bearing directly on this subject in order to aid both the legal and the public health officials.

METHODS OF CONTROL

The control of the narcotic menace, to be effective, will necessarily not only have to correlate the professions directly interested but also secure the cooperation of all charitable and social agencies in order to work out a program for the effective administration of antinarcotic laws, as well as the rebuilding of those unfortunate persons afflicted with the drug habit.

Our men and women in the shops, factories, offices and homes must be properly protected from this growing evil, and all individuals and organizations should concern themselves regarding the unsatisfactory con-

ditions prevailing, and aid in better enforcement of the statutes regarding narcotic drug addiction.

One of the very first needs is to make compulsory the reporting by physicians and others of addicts (Class 2) in order that these persons may be known and given careful and suitable consideration. Another regulation is that all prescriptions issued for opiates and cocain should be in duplicate, one for the druggist and the other for some central agency (preferably a local department of health), that the practice in this particular may be independently checked and controlled.

CHARACTERISTICS OF ADDICTS

The etiology of narcotic drug addiction is not unusual or complicated. It is a natural sequence of indulgence in narcotics for a more or less variable period. The very susceptible acquire the habit in very short periods of time, some as short as ten days (some girls state that, after having sniffed three or four times, the withdrawal symptoms were marked); but usually it requires a number of such indulgences. Medically considered, it is thought that any one taking repeatedly a drug for a period of from three to five weeks is in grave danger of becoming an addict. When addiction has been established, it is usually impossible for the individual to discontinue the use of the drug without outside assistance.

In the clinic, 7,464 cases were cared for; and while gradual reduction (one-half grain every other day) was the custom, yet it was extremely difficult to hold our patients to schedule. A number openly opposed reduction; and when the amount was cut down about half, they left the clinic, not to return, or to return under a different name to commence again at the maximum dosage (15 grains) and pursue another course of reduction. Many were detected doubling in this manner. Of the total mentioned above, less than 2,000 availed themselves of hospital aid, 23 per cent. being the actual admissions. This demonstrates that they either feared to undertake a cure or else did not want to be cured.

There is no conclusion to be drawn regarding susceptibility as concerns age, sex or marital conditions. The same statement might also be made regarding race, occupation and other similar factors. The chief direct cause appeared to be evil association, in our experience 96.5 per cent. giving this as the cause of the practice.

Addicts have been found engaged in all lines of work. An early analysis disclosed that the skilled and the unskilled were about evenly divided, and this continued in the final analysis to be a fact. It was astonishing to find that 23 per cent. were engaged in transportation; chauffeurs, trainmen, drivers and motormen being the chief occupations given by the patients themselves. The preponderance was in the order given. This fact is considered, especially in New York City, to be a grave menace. In a case recently tried (*U. S. Government* v. *Jacobs-Cardoza*), it was testified by a physician that the chauffeur needed cocain to keep him on his job, or else he would be inattentive and sluggish and be unable to take care of his car in an emergency.

In a study of the occupations as a determining factor in causation, it was demonstrated that when hours were irregular, meals badly served, and stress and irritations frequent, addiction was more common. It was most frequent in those who handled the drugs, physicians, nurses and pharmacists being proportionately the largest indulgers.

The effect of addiction on the character of a person was marked. Some drug addicts appear perfectly normal even to the experienced observer. Some were determined to be addicts with considerable difficulty. In the weak willed and those lacking character and where a drug-jag was apparent, determination was easily made.

The addict is not always a hopeless liar or a moral wreck or a creature sunk in vice and lost to all sense of decency and honor, but was frequently in our experience an upright person except as concerned his affliction or the procuring of the drug of his addiction. Addicts lied about dosage; but when they found that the game was "on the level" they would voluntarily admit deception and tell what they were actually taking.

When it is considered how these creatures were hounded and imposed on by the illicit prescriber and dispenser, as well as how they endeavored to escape police detection and family discovery, it was natural to meet some peculiar situations; but when sanctuary was assured, they calmed down and became friendly and communicative, and in many instances helped the officials to aid them in getting rid of their habit. Most of them when freed are anxious to remain free. I have been assured of this so often by addicts who have been off the drug and whom I have followed up that I make this statement advisedly and with positive assurances that many of our cases are off the drug for good, provided all temptation is removed. There were many instances in our experience in which the victims of this condition were persons of the highest qualities, physically, morally and intellectually, and some held high positions of authority and responsibility. One is a signalman who for twenty-five years has been addicted, yet has not missed a day from work and has never been reported for any company infraction, and, strange to relate, his superior officer was wholly unaware of his misfortune. This man took the cure and returned to his position, and for the last six months has been off the drug.

The correctional class I do not desire to discuss here, as the subject is one which merits special and lengthy consideration. The underworld addict is grossly misunderstood. While drug indulgence has been held accountable for his unmoral character, those whom I have had opportunity to study show degeneracy incident to association and environment, and addiction only as a secondary expedient for stimulating nerve energy and drowning painful reminiscences.

PROGNOSIS AND TREATMENT

The prognosis of narcotic drug addiction depends primarily on two conditions: control of the drug and control of the addict.

Simple, uncomplicated drug addiction is curable. By this I mean that the process of removing the drug and all physical need or craving for it is simple, safe, and can be quickly done—a matter of days only, not weeks, months or years, as some would have us believe.

There is no specific cure; none is needed. Take away the drug and prevent the addict from getting a new supply, and not only will he be cured but he will stay cured.

Addiction is not a mysterious disease, and while, from a purely scientific point of view, it would be

interesting to have more light on the problem of tolerance, there is a very general and complete understanding of drug addiction from the therapeutic standpoint among all who have dealt with it in institutions.

In the vast majority of instances—99 per cent.—excellent results may be obtained by simple abrupt withdrawal, without medication other than catharsis. Some form of mild anesthetic to tide over the first two or three days of suffering, which is mainly psychic in origin, is desirable from a humane point of view. Scopolamin (hyoscin) is ordinarily used for that purpose, but it is stated that belladonna works equally as well.

The clinic has proved in a large number of instances that it is so seldom that one can cure by the method of ambulatory treatment—that treatment in which the drug is given to the patient for self-administration—as practically to stamp such practice as improper. The method should not be permitted. It should be interdicted by law.

CONCLUSIONS

So long as addicts can obtain cheap supplies of drugs without personal risk, very few will apply for hospital curative treatment.

Narcotic drug addiction can be stopped by sufficiently stringent laws, strictly and uniformly enforced.

Public narcotic dispensaries are not desirable or satisfactory in dealing with the problem of drug addiction. This method has been given a careful, thorough and extensive trial in New York City, and we have come to the conclusion that it is unwise to maintain such an institution. The clinic was found to possess all the objectionable features and opportunities of abuse presented by the ambulatory treatment of private physicians prescribing to the addict when at large, except one factor, namely, financial profit to a few physicians performing this character of service (fifty-five out of 8,100 registered in New York City).

Ample provision should be made for hospital or institutional treatment to cover the stage of withdrawal and for the control, care, and moral and mental as well as physical upbuilding of those persons who require it and show the possibility of profiting from such treatment.

Our study and experience indicate very clearly the necessity for general and uniform enforcement of the law—the Harrison Narcotic Law. There will be no panic of addicts seeking medical relief. Prevent the addict from getting his drug, and in very many instances he will cure himself, and if unable to get the drug he will stay cured. Some have stated time and again that rapid withdrawal will be followed by collapse. It is always well to treat all cases under medical supervision, and physicians experienced in this line of medical practice know that a very small dose of the drug (from one-fourth to one-half grain hypodermically) will control all manifestations of withdrawal.

The work of reclaiming narcotic addicts is well worth while. From our recent experience I assert without fear of contradiction that at least of the many undesirables no less than one half can be brought back to useful lives, and that one fourth should be in some special institution (the types classified in *a* and *b*) where, with suitable care and training, many can be made useful citizens instead of merely being impedimenta and parasitic.

Off the drug, and with life made comfortable by suitable guidance the addict, like every normal person, faces his daily problems and can do so; but to stand alone requires after-care until he can feel at home in his new surroundings. This may take several months; but with help, redemption is sure.

The problem of narcotic drug addiction may be summed up in the problems of life, the underlying causes being more personal than social. Treatment is likewise individual and not specific.

The drug addict serves no useful purpose. He is a loss to himself and a menace to society. Addiction begins and ends in the realm of personality.

ANTHRAX: COMPARISON OF SURGICAL AND NONSURGICAL METHODS OF TREATMENT

A REVIEW OF FIFTY-ONE CASES TREATED AT THE MASSACHUSETTS GENERAL HOSPITAL FROM 1888 TO 1918

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Historically, the anthrax bacillus is of much interest. Pasteur's trials and triumphs in anthrax inoculation and immunization are well known. Davaine, working with this bacillus in 1863, and later Koch, opened up a new era in bacteriology when for the first time a micro-organism was definitely proved to have a specific etiologic relation to an infectious disease.

Anthrax is a specific and highly contagious disease, common to man and to most animals, and, according to Osler, geographically and zoologically the most widespread of all the infectious diseases. It is quite prevalent in France, Italy, Russia, China and South America, although in North America cases are rather infrequent, so much so that the occasional small epidemics find physicians undecided as to the course of treatment. Anthrax in man is always derived from some domestic animal or animal product, such as hide, hair or wool. The lesion appears about twenty-four hours after inoculation, and in the early stage resembles an ordinary small furuncle; but very quickly the central portion becomes filled with a bloody serous material. This rapidly changes to a black central necrosis which, on drying, gives the typical small, black eschar, or crust, commonly seen at the time patients come for treatment. This eschar is encircled by a ring of small, pearly vesicles, and surrounding this is a rather extensive brawny edema.

In animals the disease is contracted by the ingestion of forage containing anthrax spores. Flies evidently also play a minor part, as Schuberg [1] succeeded in transferring the infection from a cadaver to living animals by means of the stable fly. He also demonstrated that anthrax organisms remained viable in the stomach of flies for months, while Graham-Smith [1] recovered positive cultures from feces of house flies three years after deposition. The bacillus itself is easily destroyed; but in the presence of oxygen, markedly resistant spores are formed which are not affected by ordinary means of disinfection.

REVIEW OF CASES

The cases of anthrax treated at the Massachusetts General Hospital between 1888 and 1918 are the basis

1. Cited by Mitzman, M. B.: Summary of Experiments in the Transmission of Anthrax by Biting Flies, Bull. 94, Hyg. Lab. U. S. P. H. S., pp. 41-48.

of this study. The interesting contrast of results between the surgical and nonsurgical methods of treatment affords sufficient excuse to add this series to an already overburdened literature. In recent articles on anthrax, surgery and cauterization are frequently advised, but statistical reports are strikingly few.

These cases were not selected as surgical or nonsurgical, according to the condition of the patient. The nonsurgical cases are more recent and were treated conservatively following a suggestion by Dr. J. Homer Wright.

COMPARATIVE RESULTS OBTAINED IN CASES TREATED SURGICALLY AND NONSURGICALLY

	No.	Per Cent.
Total cases	51	
Total deaths	7	13.7
Cases treated surgically	9	
Deaths	4	44
Cases treated nonsurgically	42	
Deaths	3	7

The average duration of the disease in patients that recovered was twenty-three days. Death in the seven fatal cases occurred on an average of four days after the onset of the disease.

In forty-two, or 82.3 per cent., of the cases, the lesion was located on the face or neck. Infections in this region are considered especially dangerous on account of the proximity of vital structures. The loose cellular tissues in this area aid in the spread and extension of the local lesion, and the resulting edema in the neck often gives rise to marked respiratory difficulty.

Thirty-eight infections were in men engaged in handling hides; of these, twenty-three were leather tanners. All of the patients treated were males except one. This was a girl, aged 17, who was employed sorting bristles in a brush factory.

The general symptoms found in this disease, such as nausea and vomiting, restlessness and headache, are often absent and have no constant relation to the extent of the disease. In the majority of cases a rise in temperature of 2 or 3 degrees was noted which generally persisted only for from three to four days. Cases which are ushered in with marked symptoms and a sharp rise in temperature indicate a definite reaction on the part of the patient, and in such cases there was a favorable and rapid termination of the disease. The temperature is often low in grave cases, and in several a subnormal temperature was noticed just before death.

Anthrax is often mistaken for cellulitis or a carbuncle. An early diagnosis of the condition can be made bacteriologically by demonstration of the anthrax bacillus in the lesion. After the crusting over of the lesion, it is necessary to elevate the cutaneous edge and probe between the crust and the skin in order to find suitable material for examination. Of the fifty-one cases of this series, the anthrax bacillus was found in forty-one; in two cases negative results were reported, and in nine no record of the presence of the bacillus was made.

The patients were isolated, and precautions were taken against the spread of the infection. In the majority of cases, there was no discharge, and no case of reinfection was noted. The anthrax bacillus does not form pus. In one case, fifteen days after the onset of the disease, the initial lesion having practically healed, definite swelling and brawny induration indicated pus in the region of the submaxillary gland. Wide excision of this area with a thorough spreading of the tissues failed to reveal any pus.

The first of the four deaths in the Massachusetts General Hospital following surgical procedure in the treatment of anthrax occurred in a man with a lesion of the right cheek. The patient died nine hours after excision of the pustule without having rallied from the operation. In the second case of death, a spreading of the edema was noted directly after operation, which consisted in a wide excision of a lesion in the neck. Seven hours later the patient was pulseless, the temperaure dropped to 97 F., and death occurred shortly after. The third death was also in a case of anthrax of the neck; an elliptic incision 10 by 12 cm. was made down to the deep fascia. This patient showed some improvement; but on the second day after operation, the edema extended, and the patient died on the following day. The fourth death was in the case of a lesion on the arm; a crucial incision was made, but rapid extension of edema followed the operation, and the patient died several days later.

A fifth patient with an infection on the forearm recovered after an amputation at the shoulder joint. The remaining four of the group of nine patients treated surgically had uneventful convalescences following the excision of the lesion.

Patients treated nonsurgically were confined to bed. Whenever the location of the lesion permitted, the infected area was splinted and elevated. A light diet was given, and fluids were forced to the maximum amount.

The infected area in the earlier cases was covered with dry gauze or mercuric chlorid poultices. The cases treated during the last three years cleared up more rapidly, and the patients were more comfortable when no dressings were used, the lesion being exposed to the air.

Anthrax patients were considered potential sources of infection until three consecutive smears taken on alternate days proved them to be otherwise.

Of the three deaths in the nonsurgical cases, the first occurred in a patient with a lesion on the right side of the neck. Edema extended over the face, neck and upper chest wall. The blood gave a positive culture for anthrax. The patient was markedly dyspneic and had practically stopped breathing when a hurried tracheotomy was performed without benefit. The second death also occurred in a case of cervically located lesion. There was marked edema and respiratory difficulty. A tracheotomy was performed through infected tissues without noticeable relief to the obstructed breathing, and the patient died two hours later. The third patient who died among those treated nonsurgically entered the hospital three days after the onset of a lesion of the right cheek. Edema was moderate, and the patient was not considered dangerously ill. On the afternoon of the first day in the hospital, the patient suddenly sat up in bed, complained of a pain in his chest, and died.

The immediate cause of death in anthrax infections is not definitely known. The decidedly toxemic nature of the disease in man indicates the existence of poisons, even though true secretory or endotoxins have not been isolated. Vaughan in summing up the results of his experimental work on anthrax, states that the pathogenicity of a bacterium is not measured by its capability of furnishing a poisonous group, but by its

ability to grow and multiply in the animal body. Hiss and Zinsser state that it is probable that death is brought about by purely mechanical means, such as capillary obstruction.

METHODS OF TREATMENT

Ravenel states that anthrax begins as a local infection, and that the bacilli are localized in and near the lesion. For this reson, he advises immediate destruction of the pustule or focus of infection. Most surgical textbooks advise radical removal as the safest recourse.

Hiss and Zinsser assert that although the bacilli are not demonstrable in the blood until just before death, they invade the blood and lymph streams immediately after inoculation and are conveyed to all the organs. This was demonstrated by inoculations in the tails or ears of guinea-pigs, after which these parts were impediately amputated. The spread of the disease and fatal outcome were not prevented by these measures. The bacilli in the early stages are not able to multiply in the blood, however, at the site of inoculation, and probably in the organs also, they proliferate until the resistance is entirely overcome. At this stage of the disease, when the antagonistic action of the blood has been destroyed, the bacilli may multiply in the circulation and can then be demonstrated in the blood. A positive blood culture was found in only one case of this series.

Becker [2] made a study of blood cultures in forty-one cases. Eleven of the cultures were positive; ten of the patients died. The eleventh was treated intravenously with arsphenamin and recovered. Roos [3] asserts that in animal experimentation he found arsphenamin to have a specific action on the anthrax bacillus, acting directly on the bacteria. Laubenheimer [4] also reports a case with positive blood culture successfully treated with arsphenamin.

Prätorius,[5] whose experience with anthrax has been very extensive, advises against surgical interference, as this opens up the lymphatics and aids in the spread of the disease.

Müller [6] asserts that it is impossible to destroy the disease by excision of the site of inoculation. He carried out a series of experiments similar to those cited by Hiss and Zinsser. In guinea-pigs, he was unable to prevent the spread of the disease by amputation of the inoculated area. He states that treatment should aim to assist the cells about the inoculated area in preventing dissemination of the bacteria. Excision is harmful, as it tends to break down the natural barriers to the local infection and to increase the absorption of the toxic substances around the lesion. In a number of cases in the Massachusetts General Hospital series, operation was so closely followed by extension of the edema, septicemia and death that it was undoubtedly a causative factor. Müller believes in immobilization and elevation of the infected part; he reports thirteen successfully treated cases. Eurich [7] asserts with regard to immobilization that the most severe cases are those in which the lesion occurs in parts of the body in which motion is free and in which the cell tissues are lax. Three of his ten patients who had lesions on the wrist died. There were no deaths among the ten patients with infections on the arm. Eurich insists that absolute rest of the part affected is necessary.

Graef [8] reports 384 cases in which cauterization with potassium hydroxid was performed with only a 5 per cent. mortality. Potassium hydroxid is extremely painful when applied to the skin, and often leaves extensive scarring. Pied [9] drives a blast of hot air on the lesion through a small needle, until the eschar and vesicular area are completely cauterized. He asserts that no anesthetic is necessary, as there is an anesthesia to pain and heat about all anthrax lesions. He advises continuing the cauterization 0.5 cm. beyond the anesthetic area.

Muskett [10] found in laboratory experiments that ipecac readily destroyed the anthrax bacillus. He cites fifty cases successfully treated by applying powdered ipecac to the lesion. Fortineau [11] found an antagonistic action between *Bacillus pyocyaneus* and *Bacillus anthrax*. He treated thirty-two patients by injection of an extract from a culture of *Bacillus pyocyaneus;* one patient died.

A number of recent articles on anthrax mention phenol (carbolic acid) injection. Scharnowski [9] reports fifty cases from Russia, with a 2 per cent. mortality. Regan [12] reports a successful case, and suggests phenol injection at the site of the wound.

Anthrax serum was used in only one of the cases of this series. The temperature, which had remained at 103 F. for five days, dropped immediately after the first injection and remained normal. Sclavo, in 1895, in Italy, and Marchoux, in 1895, in France, reported the use of anthrax serum. The serum has been used extensively in Italy and also recently in France, but only rarely in this country, although it is readily obtainable here. Legge [13] studied a series of cases in Italians treated by Sclavo with serum. In 164 cases there was a mortality of only 6.09 per cent., in contrast to 24 per cent., the rate for all cases treated in Italy over a period of fifteen years.

Pied [9] cites nine cases with a positive blood culture, in seven of which serum treatment was used successfully. Bissell [14] and Graham [15] also report two cases with positive blood culture, successfully treated, serum having been used.

Bowlby and Andrews [16] report a case in which cultures from the vesicles around the lesion yielded abundant anthrax bacilli. Nineteen hours after an injection of serum, cultures similarly taken were negative. Serum, which is evidently not harmful to the patient, generally arrests the extension of the edema,

2. Becker, G.: Die bakteriologische Blutuntersuchung beim Milzbrand des Menschen, Deutsch. Ztschr. f. Chir. **112**: 265-283, 1911.

3. Roos, O.: Ueber die Einwirkung von Salvarsan auf Milzbrandbacillen, Ztschr. f. Immunitätsforsch. u. exper. Therap. **15**: 487-505, 1912.

4. Laubenheimer and Bettman: Ueber die Wirkung des Salvarsans auf den Milzbrand, Deutsch. med. Wchnschr. **38**: 349-351, 1912.

5. Prätorius, P.: Milzbranddiagnose durch Untersuchung des Liquor zerebrospinalis, St. Petersb. med. Ztschr. **38**: 290, 1913.

6. Müller, K.: Der äussere Milzbrand des Menschen, Deutsch. med. Wchnschr. **20**: 515-535, 1894.

7. Eurich, F.: Anthrax in the Woollen Industry, Proc. Roy. Soc. Med. **6**: 219-240, 1912, Sect. Epidemiol. and State Med.

8. Quoted by Legge, T.: Industrial Anthrax, Brit. M. J. **1**: 589, 1905.

9. Pied, H.: Sur le pustule maligne, Bull. méd., Paris **21**: 1135, 1913.

10. Muskett, F.: On the Specific Treatment of Anthrax and Anthracemia, Lancet **1**: 269, 1888.

11. Fortineau, L.: Traitement du charbon par la pyocyancine, Presse méd. **20**: 678, 1912.

12. Regan, J. C.: Human Anthrax, Am. J. M. Sc. **157**: 782 (June) 1919.

13. Legge, T.: Industrial Anthrax, Brit. M. J. **1**: 589, 1905.

14. Bissell, J.: Human Anthrax, New York M. J. **106**: 110 (July 21) 1917.

15. Graham, R. R., and Detweiler, H. K.: Anthrax: A Case of B. Anthracis Septicemia with Recovery, J. A. M. A. **70**: 671 (March 9) 1918.

16. Bowlby, A., and Andrews, F.: Anthrax Treated with Sclavo's Serum, Brit. M. J. **1**: 296, 1905.

which is the most troublesome feature of the disease. Krause,[17] in a number of recent articles, reports successful results from the use of normal serum in the treatment of anthrax in man. From 30 to 50 c.c. are injected daily, either subcutaneously or intravenously until the acute symptoms have subsided. Two hundred cases are reported with a 0.5 per cent. mortality. Kolmer,[18] after experimenting with beef serum, concluded that while it contained some antibactericidal properties, they were without demonstrable protective and curative value in experimental anthrax infections in mice and rabbits.

COMMENT

The majority of the methods of treating anthrax described in the literature are conservative. Surgical intervention offers very little. The organism is building up protective barriers and walling off and splinting the infected area. The main contention of those advising surgery is that the lesion is strictly a local one, and excision should be performed before generalization takes place. On the contrary, there is probably a systemic infection from the onset, but in most cases it is not so great that the organism cannot overcome it. The involvement of neighboring lymph glands which is seen in most cases, and the marked edema which, at times, extends as much as 25 cm. beyond the local lesion, argue against a localization of the infection. A wide excision through this edematous area, giving an extensive field for absorption, opening up many new portals of entry is sufficient, in some cases, to overcome completely the resistance of the patient.

SUMMARY

1. The early diagnosis is made bacteriologically by the demonstration of the anthrax bacilli in the wound. Anthrax bacilli were found in 81.2 per cent. of the cases treated at the Massachusetts General Hospital.

2. The general symptoms give no constant indication of the severity of the infection.

3. The mortality in the cases reviewed was 13.7 per cent.

4. Four of nine patients (44 per cent.) treated surgically died; only three (7 per cent.) treated nonsurgically died.

5. Forty-two patients had lesions on the face and neck. Cervical infections are especially dangerous; two of the patients treated nonsurgically died from respiratory difficulty resulting from the associated edema.

6. The patients treated nonsurgically were confined to bed. Their lesions were left absolutely alone and exposed to the air; no special general measures were carried out.

7. In several of the surgical cases a rapid increase in the edema, a steady decline in the patient's general condition, and death several hours later definitely pointed to the operation as the causative factor.

17. Penna, J.; Cuenca, J. B., and Krause, R.: Normal Beef-Serum in Treatment of Anthrax, Prensa méd., Argentina **28**: 297, 1917; ibid. **30**: 455, 1918; abstr. J. A. M. A. **68**: 1589 (May 26) 1917; ibid. **69**: 234 (July 20) 1918.

18. Kolmer, J. A.; Wanner, D., and Koehler, M.: Influence of Normal Beef Serum on the Anthrax bacillus, J. Infect. Dis. **26**: 148 (Feb.) 1920.

Disease and Symptoms.—Disease is made manifest to us only by the symptoms it produces, hence it is imperative that the first step should be to understand the nature and significance of symptoms.—J. MacKenzie, *Brit. M. J.* **1**:105 (Jan. 24) 1920.

SUCCESSFUL TREATMENT OF GIARDIASIS IN MAN WITH NEO-ARSPHENAMIN

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The pathogenicity of *Giardia* (*Lamblia*) *intestinalis* is now fairly definitely established; in fact, this flagellate has recently been described as the causative organism of "trench diarrhea,"[1] a dysenteric condition which most of the overseas troops experienced and from which a number of the returned soldiers are still suffering.

Several different medicaments have recently been employed in the treatment of this disease; and, while some of these[2] have been found to give temporary relief, no permanent cure has hitherto been effected.

The rôle which salts of heavy metals, notably mercurial and arsenical preparations, play in the treatment of syphilis and some other flagellate diseases is common knowledge; and at least two groups of workers have observed that the cysts of *Giardia muris* disappeared from the feces of infected rats following intravenous injections of heavy doses of arsphenamin. Probably the most noteworthy of these observations are those made by Kofoid and his associates.[1] However, so far as we are aware, no attempt has been made to utilize these substances in the treatment of human diseases caused by intestinal protozoa.

Since neo-arsphenamin is being used with good success against the syphilis flagellate, it occurred to us that intestinal flagellates, and possibly also other intestinal protozoa, might prove to be susceptible to the action of this product; and, moreover, since the oxidation products of neo-arsphenamin are readily excreted by the way of the intestinal tract, intestinal protozoa ought to be more easily reached than the syphilis organism, which is often intracellular. It was, therefore, not surprising when in the course of our investigations we observed that not only the cysts of *Giardia intestinalis* and *Chilomastix mesnili*, but also those of *Endamoeba coli*, *E. histolytica* and *E. nana*, rapidly disappeared from the stools of man following intravenous injections of neo-arsphenamin, and that the cysts of *Eimeria stiedae* disappeared from the feces of rabbits following intramuscular injections of heavy doses of neo-arsphenamin. Whether or not the results obtained through this treatment are permanent is yet to be determined. A number of cases are under observation, and these will be reported on as soon as a sufficient period of time has elapsed to enable one to draw definite conclusions. In the case here reported, however, a permanent cure appears to have been established.

REPORT OF CASE

History.—W. G. S., aged 25, American, a salesman, formerly a soldier, who came in July, 1919, complained of

1. Kofoid, C. A.; Boeck, W. C.; Minnich, D. E., and Rogers, J. H.: On the Treatment of Giardiasis in Rats with Arsenobenzol, J. Med. Res. **39**: 293-299 (Jan.) 1919.

2. Wenyon, C. M., and O'Connor, F. W.: Human Intestinal Protozoa in the Near East, published for the Wellcome Bureau of Scientific Research by John Bale, Sons & Danielsson, London; reprinted from J. R. A. M. C. **29**: 1-34, 157-187, 346-370, 461-492.

abdominal pain more or less continuous but varying in intensity and interfering greatly with work, together with an intermittent diarrhea. The family history was negative. The personal history was negative as regards the present trouble. June 22, 1918, the patient entered the army. He was detailed to a northern university for study, and on Oct. 16, 1918, he was sent across. He remained in Brest nine days. On the ninth day a distressing diarrhea started, and persisted all night. This was the only serious acute attack that he had, but he continued to have from four to six movements a day for the remaining six months he was abroad. Part of this time the stools were black. He received no treatment. He was discharged, March 11, 1919. The patient experienced a return of abdominal distress in May or June, 1919, when it gradually became worse. He lost twenty-five pounds in four months. Frequent stools varied with the pain, and were watery, containing much mucus and some blood. He had been examined several times and had been variously advised. In one hospital he understood the diagnosis to be duodenal ulcer, and it was with this belief that he came to us for advice and treatment.

Examination.—Conclusions were drawn from physical and roentgen-ray examinations that a gastric or duodenal lesion did not exist and that the irritable intestinal tract must result from a parasitic or reflex cause. The Wassermann test was negative. The urine had a specific gravity of 1.025; it was neutral and clear; Fehling's test was negative; there was a trace of albumin; the sediment was negative. Macroscopically, the stool was unformed, dark brown, almost black, and pasty; it contained some mucus; the patient reported a bloody mucous stool a few days previous to this examination. On microscopic examination a few motile forms of *Endamoeba histolytica* and numerous cysts of *Giardia intestinalis* of the so-called "large race" were found.

TREATMENT

Emetin.—On establishment of the diagnosis of amebic dysentery by the identification of *Endamoeba histolytica*, one-half grain of emetin hydrochlorid was administered hypodermically daily, together with two alcresta ipecac (Eli Lilly Company) tablets by mouth three times a day after meals for fourteen days. Stool examinations were made daily.

Results: *Endamoeba histolytica* disappeared from the stools on the second day and did not reappear. No cysts of this organism were encountered. The character of the stools improved; they were less frequent, less watery, and contained less mucus and no blood that could be detected macroscopically. There was no appreciable decrease in the number of cysts of *Giardia intestinalis*. The abdominal discomforts still persisted.

Sulphur.—In September the patient's stools again became frequent and semifluid. The endamebas were absent from the stools, but the cysts of *Giardia intestinalis* were present in even greater numbers than before. A sulphur treatment was instituted in the hope of controlling this flagellate. Beginning with 15 grains and gradually increasing to 25 grains, sublimed sulphur was administered by mouth three times daily for fourteen days. Stool examinations were made every alternate day.

Results: On the second day the number of cysts was found to be greatly reduced; on the fourth day cysts were detected only after concentration of the stool by centrifugation; on the sixth day the number had greatly increased, while on the eighth day and thereafter the cysts were as abundant as ever. No change in the patient's condition was observed.

Neo-Arsphenamin Treatment (single injection).—In November the patient reported severe abdominal pains, and was able to obtain relief only by wearing a tightly fitting bandage over the point of attack. November 29, 0.6 gm. of neo-arsphenamin was introduced into the blood stream. Stool examinations were made daily for six successive days.

Results: Examination was made of the last part of a stool passed three hours after the treatment; no cysts were found at this examination; however, unfortunately, no examination was made of the first part of the sample passed, nor had a stool examination been made for six days previous to the treatment. The cysts did not reappear in the stools during the six days following the treatment. The patient's condition improved and he was able to remove the bandage.

Neo-Arsphenamin Treatment (three injections).—December 24, the patient reported a recurrence of the abdominal discomfort. An examination of his stool made on this day revealed numerous cysts of *Giardia intestinalis*. These cysts varied greatly in size and shape; some typically shaped cysts were only one-third the usual size, others were larger than normal, while still others were flat on one end. December 24 and 29 and January 2, intravenous injections of 0.6 gm. each were made; and, following the second injection, calomel and castor oil were administered by mouth. Stool examinations were made daily for twelve successive days during and following the period of treatment; and for six successive days once a month thereafter.

Results: The cysts of *Giardia intestinalis* were greatly reduced in number in the first sample collected after the first injection and were entirely absent from the stools on the second day after the first injection, and have not since recurred. The patient's condition has greatly improved; his stools have become normal and his abdominal discomforts have abated.

INCIDENCE OF TUBERCULOSIS IN HUSBAND AND WIFE *

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A great deal has been written on the degree of infectiousness of the tuberculous consort to the well one. The pendulum has swung from one extreme to the other. It is about time we were taking what I consider a sane view of the matter. The question is whether or not there is such a thing as adult infection. If there is such a thing we have in the man and wife the ideal relation, or culture medium, namely, prolonged and intimate contact.

Probably the most radical exponent against the theory of adult infection is Fishberg,[1] who says he has never observed a case of tuberculosis transmitted from one consort to the other. He gives as proof of the impossibility of adult reinfection the fact that the hospital staffs in institutions harboring tuberculosis patients do not suffer from tuberculosis more than others.

In another study, Fishberg[2] has investigated the conditions under which many of the tuberculous live. He examined 170 consumptives, nine of whom were women and 161 men. In the latter group he found that seventy-eight of the wives lived with their tuberculous husbands at home, and of these fifty-one slept in the same room and twenty-three even shared their beds with them. Of the rest, twenty-seven of the tuberculous husbands were inmates in sanatoriums or hospitals for consumptives, and five were away from home, though not in institutions. He also found that during the time of the illness of the affected consorts, forty-eight children were born. Out of this number Fishberg found that in only 3 per cent. of the cases both husband and wife were tuberculous—a rather strong argument against adult infection.

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* From the Denver Municipal Tuberculosis Dispensary.
* Read before the Medical Society of the City and County of Denver, April 6, 1920.

1. Fishberg, Maurice: Traditional Fallacies About Tuberculosis, New York M. J. 104: 1085 (Dec. 2) 1916.
2. Fishberg, Maurice: The Rarity of Conjugal Tuberculosis, Am. J. M. Sc. 153: 395 (March) 1917.

Sir Hermann Weber [3] found in "sixty-eight persons, male and female, who with more or less pronounced consumptive taint had married healthy partners, that ten of the partners of these sixty-eight cases became consumptive, or 14.7 per cent. Nine of the tuberculous husbands lost eighteen wives, namely, one lost four, one lost three, four lost two each and three one each."

I. Burney Yeo [4] collected records of 1,055 cases of consumption, which had come under his observation consecutively in the hospital. Of this number, 621 were males and 434 females. Of the males, 306 were married, 297 were single, and eighteen were widowers. Of the eighteen widowers, only two, or about 11 per cent., could state positively that they had lost their wives by consumption. Of the 434 females, 199 were married, 206 were single, and twenty-nine were widows, only five or 17 per cent., were able to state positively that their husbands had died of tuberculosis.

Among 159 couples in which one of the partners was tuberculous, Brehmer [5] found that in nineteen, or 12 per cent., both suffered from the same disease.

Haupt [6] found in 417 cases twenty-two, or 5.2 per cent., in which both partners were affected with tuberculosis.

Cornet [7] found among 594 couples that both partners were tuberculous in 23 per cent. of the instances.

Jacob and Pannwitz,[8] in a collective investigation in several German sanatoriums, found that in 8.57 per cent. of the cases, conjugal tuberculosis was present.

An excellent and exhaustive statistical work on this subject has been published by William Weinberg,[9] who found that among 1,426 husbands of tuberculous wives, 118, or 8.3 per cent., died from this disease. Among 2,506 wives of tuberculous husbands, 112, or 4.5 per cent., succumbed to this disease, or among 3,932 consorts of tuberculous persons 230, or 5.9 per cent., died from tuberculosis. He thus finds that the mortality from phthisis among those who are married to consumptives is about double that observed in the general population, in which it is about 2.7 per cent.

Ludwig Levy [10] investigated 317 married couples who lived in poverty and want. Thirty-four per cent. shared the same bed. Two and eight-tenths per cent. of the disease was due to marital infection.

Ward,[11] in an analysis of 156 cases in which the mate of a tuberculous husband or wife was examined, found the extraordinary number of ninety-one, or 58 per cent., tuberculous. Sixteen were considered suspicious, and forty-nine negative.

Wilson Fox [12] cites a few cases of great interest:

A. A phthisical man married several times, and most of his wives became phthisical.

B. A consumptive man died, having transmitted the disease to his wife, who infected her second husband.

C. A man infected his wife and died. His widow remarried and also died of tuberculosis, as did her second husband, after he had remarried. His widow lived and also married again, and the next husband died of tuberculosis.

D. A woman married two tuberculous husbands in succession and became tuberculous after the death of the second.

E. A consumptive wife died leaving an infected husband, who infected a second wife.

F. A consumptive wife, before dying, infected her husband, who later infected a second wife. This widow afterward infected a second husband.

G. A woman died of tuberculosis. Her husband, not said to have been tuberculous, married three other wives. Of his four wives, the first, second and third died of tuberculosis, but the fourth wife and the husband were apparently free from the disease.

Another convincing study has been made by Crouch [13] of the Modern Woodmen Sanatorium, Colorado Springs. His investigations covered 4,100 cases, all males. Of this number, 2,771 were married, and 233 were widowed. Out of this total of 3,004 cases, 193, or 6.4 per cent., had wives who showed either a history of tuberculosis or who had died of tuberculosis. In the consideration of the widowers, however, he found that 136, or 58.37 per cent., lost their wives from tuberculosis. He concludes that "58.37 per cent. of tuberculosis among 233 widowers is certainly more than a coincidence."

The conclusions of other men who have made a special study of marital tuberculosis with the percentage of contagiousness they have found in their investigations are given herewith: Elsasser,[14] 39 per cent.; Gebser,[15] 5 per cent.; Joussert,[16] 3 per cent.; Thom,[17] 3 per cent., and Turban,[18] 6 per cent.

There is a variation in the statistics of from 3 to 58 per cent. Of course, it is possible that both husband and wife may have tuberculosis when they marry, which contingency has to be taken into consideration.

Levy [10] and Ward [11] have made the interesting observation that when the consort died and the other consort had clinical tuberculosis, often the infection after six months was overcome or the patient was much improved. This occurred in spite of the fact that usually there was the added responsibility of taking care of the children alone. This was true not only in the case of the surviving husband but also in the case of the surviving wife. This would show that the continued massive infection was each day lowering the consort's resistance; but when he was not exposed to the continuous culture of tuberculosis, he improved.

RESULTS OF AUTHOR'S INVESTIGATION

In my investigation, which covered 1,000 successive dispensary cases, I was especially careful to classify none as tuberculous which were in the least doubtful.

I considered that a case was tuberculosis if the bacilli were present, or if there was a history of hemorrhages, a number of attacks of pleurisy, dulness with persistent moisture over the apexes continuing for a year or more, or if the patient died of tuberculosis. In other words, I considered only positive cases of tuberculosis and no suspects. In the series of cases, 502 of the patients were married and 498 were single.

I found that among these 502, there was active tuberculosis in husband and wife in forty-four cases, or 8.7 per cent. Of the forty-four cases, twenty-two of the consorts had died of tuberculosis, or 50 per

3. Weber, Hermann: On the Communication of Consumption from Husband to Wife, Tr. Clin. Soc., London **7**: 144, 1874.
4. Yeo, I. B.: Contagiousness of Consumption, Brit. M. J. **1**: 895, 1888.
5. Brehmer, Herrmann: Die Therapie der chronischen Lungenschwindsucht, Berlin, 1885.
6. Haupt: Deutsch. med. Wchnschr. **11**: 340, 1890.
7. Cornet, George: Tuberculosis, Philadelphia, W. B. Saunders Company, 1904, p. 263.
8. Jacob, Paul, and Pannwitz, Gotthold: Entstehung und Bekämpfung der Lungentuberkulose, Berlin, 1904.
9. Weinberg, William: Lungenschwindsucht bei Ehegatten, Beitr. z. Klin. d. Tuberk. **8**: 365, 1906.
10. Levy, Ludwig: Statistisches über Tuberkulose der Ehegatten, Beitr. z. Klin. d. Tuberk. **32**: 147, 1914.
11. Ward, E.: Conjugal Tuberculosis, Lancet **2**: 606 (Oct. 4) 1919.
12. Fox, Wilson: Diseases of the Lungs, London, 1891, p. 571.
13. Crouch, J. B.: Personal communication to the author.
14. Elsasser: Mitteilungen über die Gefahr der Tuberkulose für Ehe und Familie, Annsberg, Becker's Verlag, 1901.
15. Gebser: Auf der 7. Tuberkulose Versammlung Karlsruhe, 1910.
16. Joussert: Inaug. diss., Paris, 1908.
17. Thom: Tuberkulose Ansteckung unter Eheleuten, Ztschr. f. Tuberk. u. Heilstättenwesen **7**: 12, 1905.
18. Turban: Beitrage zur Kenntniss der Lungen-Tuberkulose, 1899.

cent. Of the twenty-two surviving consorts, seventeen were men and five women. In these twenty-two, tubercle bacilli were present in twelve of the widows or widowers. The period of illness extended from four months to twenty years.

Of course, it is to be borne in mind that my investigation dealt only with the poorer classes. I have not included in the forty-four any cases in which, for instance, there was dulness with suppressed breath sounds or even bronchovesicular breathing at one or both apexes and a vague history of pleurisy or other mild symptoms, but no moisture. No doubt many of these were tuberculosis carriers, yet not clinically open cases of tuberculosis; but no doubt, they were open cases part of the time. Had I considered these, the percentage would be still higher.

That there are these carriers among us is shown by these private cases:

REPORT OF CASES

CASE 1.—A physician, aged 62, widower, weight 190 pounds, who had never been sick except that he had pneumonia at 25, who had been married twice to apparently healthy wives both of whom had died of tuberculosis, finally submitted himself to an examination. He was a well developed man. Over the left apex there was dulness and a few moist crackles after he coughed. There was no history of hemorrhage or expectoration. He suffered a severe attack of influenza in the recent epidemic, but made a good recovery.

CASE 2.—A widow, aged 28, had married at 19 a man who coughed and who had lost a sister of tuberculosis. He weighed 212 pounds at marriage, but lost 50 pounds in four months and died of tuberculosis two years before I saw her. The widow's family history was good. She had never been sick until her first baby was born in 1912 when, because she was catching colds often, she was advised to take what the physician termed a protective course of tuberculin. No doubt, she was having symptoms then. She had been coughing the past year and had lost 20 pounds. Six weeks ago, she was accepted by an old line life insurance company for $10,000 ordinary life insurance. She did not expectorate except when she had a cold, but her sputum had never been examined at that time. She had persistent râles after cough; expiration was prolonged over both apexes, and the whispered voice was exaggerated over the same area. At the right base there was a definite pleuritic rub.

COMPARISON OF FINDINGS

My findings are in accord with those of most investigators. If we take the normal incidence to be 2.7 per cent. among all classes, we do not find anywhere in the literature so low a percentage in the consort of the infected husband or wife.

When I first entered dispensary work, I was rather prejudiced in favor of the theory of the nonexistence of conjugal or adult infection; but after working a number of years among this class of patients, I was impressed not by the rarity of tuberculosis in husband and wife, but by the fact that it was a rather common occurrence and as a result made the foregoing investigation, not of selected cases but of successive cases coming to the dispensary in the year 1918 and the early part of 1919.

CONCLUSIONS

1. I have found the incidence of marital tuberculosis to be 8.76 per cent. When a consort dies, the mate has been infected in 50 per cent. of cases.

2. There is such a thing as adult infection. We should constantly bear this in mind in our advice to the layman.

3. It is evident that when there is a continued massive infection over a period of years, and especially when the consort dies, in these last years patients are especially careless and slovenly, and there is not only a possibility of contagion, but in one out of every two cases active tuberculosis supervenes.

4. My investigation covered only dispensary cases. In private practice the incidence of marital infection is smaller, proving that intelligent prophylaxis is worth while.

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CALCULI IN THE SALIVARY DUCTS

REPORT OF FIVE CASES *

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Calculi which form in the ducts of the salivary glands or in the glands themselves possess considerable clinical interest by reason of the peculiar train of symptoms, the infrequency of the lesion, and the necessity of a correct diagnosis. Unless the possibility of this condition is always borne in mind, and a careful diagnosis made, there will be numerous instances in which a totally unnecessary operation on the neck will be performed without relief of the symptoms. In one of the cases reported herewith, such a futile operation was performed despite the suggested diagnosis of calculus; and in two of the other cases, surgeons of equal or greater experience than myself were heartily in favor of a dissection of the submaxillary region for supposed lymphadenitis.

If this lesion is borne in mind, a careful history of the symptoms and a visual examination of the mouth of the duct, with a digital exploration of the floor of the mouth and buccal cavity, will in every case point strongly to the diagnosis. The roentgen-ray naturally suggests itself as the best method of diagnosis; but unfortunately it is not, and the results are very disappointing. In any event, the surgeon would first make the tentative diagnosis before a roentgenogram is made, and even its positive findings would only be corroborative evidence. As a matter of fact, the roentgen-ray report is all too often negative, when operation proves the presence of calculus. The explanation frequently given is that the calculus was lacking in material which would cast a shadow, but this is manifestly not so in any of our cases, as the accompanying illustrations show. The true explanation in most cases is that the technic of making pictures far back in the submaxillary and parotid regions is very far from perfect, and the reason that the roentgenogram is reported negative is that the lesion was never reached.

A technic intended to overcome the difficulties of the situation has been suggested by M. Arcelin.[1]

Analyses of many different salivary calculi show that they contain both organic and inorganic matter; the nucleus is usually organic: organic matter, approximately 25 per cent.; calcium phosphate, approximately 60 to 65 per cent.; calcium carbonate, approximately 6 per cent.; with traces of iron, magnesium, etc.[2] They are usually oval or olive shaped if formed in the duct; but round or irregular if formed in the gland. The color is gray or yellowish usually; the consistency variable from hard to soft. The surface is more often

* From the Second Surgical Division, New York Hospital.
1. Arcelin: Lyon méd. 118: 709, 1912.
2. Prouzergue, R.: Arch. de méd. et pharm. mil. 58: 125, 1911.

rough than smooth and may be grooved longitudinally. When multiple the stones may be faceted. The average weight of the calculi is from 5 to 20 gm.

REPORT OF CASES

CASE 1.—*Salivary calculus; right submaxillary; removal from Wharton's duct by incision in floor of mouth.*

History.—Walter T.,[3] English, aged 31, stable groom, admitted to the Presbyterian Hospital, Sept. 21, 1904, and discharged, Oct. 14, 1904, three weeks before, while eating, had experienced pain in the right side of the "throat," and noticed a "bunching up" or fulness below the angle of the jaw on the right side. Between meals there was no pain and the swelling became smaller, but every attempt to eat solid food caused an attack of pain and swelling.

Examination.—There was a lobulated swelling in the right submaxillary region. In the floor of the mouth there was a rounded, fluctuating swelling opposite the last two molar teeth. No roentgenogram was taken in this case.

Operation and Result.—September 27, under the mistaken diagnosis of suppurative cervical lymphadenitis, a dissection of the right submaxillary region was made by one of the surgeons. No abscess was found; but a portion of the enlarged and inflamed submaxillary salivary gland was excised. There was no relief from symptoms after this operation, and October 10, I inserted a probe into Wharton's duct to a distance of 4 cm., recognized the sharp click of a calculus, and on opening the duct at this point under local anesthesia, removed a calculus, the size of a small cherry pit (Fig. 1). Four years later, the patient was perfectly well and had had no return of any symptoms.

Comment.—A possible etiologic factor in this case was an alcoholic habit with neglect of mouth cleanliness, although there was no pyorrhea. Also as a groom about the stables, the patient had been in the habit of chewing grain and straws, a particle of which may have entered the duct and acted as a foreign body nucleus.

CASE 2.—*Salivary calculus; left submaxillary; removed from Wharton's duct through floor of mouth* (Fig. 2).

History.—Paul T., aged about 24, born in the United States, soldier, admitted to the hospital, Dec. 23, 1918, had had no previous attacks of a similar trouble. The present illness began about ten days before with a painful swelling in the left submaxillary region. Both pain and swelling were made worse by chewing food.

Examination.—There was a swelling of the left submaxillary gland; and in the floor of the mouth there were elevation and thickening along the course of the left Wharton's duct, with swelling and redness of the papilla.

Operation and Result.—The floor of the mouth was cocainized, and with some difficulty a whalebone filiform bougie was passed into the duct encountering obstruction at a distance of about 3 cm. The duct was then split open along the probe, and a calculus 1 cm. long was delivered with a small spoon curet. After this there was immediate relief and a rapid subsidence of the swelling of the submaxillary gland. Attempts to roentgenograph this suspected calculus, dental films being used on the floor of the mouth, had been unsuccessful, nor was it definitely palpable with a finger in the mouth.

CASE 3.—*Salivary calculus; left submaxillary; removal from Wharton's duct through floor of mouth* (Fig. 3).

History.—E. R. S., aged 42, born in the United States, clerk, referred to me by Dr. McCastline, and treated in the office, had had attacks of severe pain in the "throat" for from five to six years while eating, accompanied by swelling at the angle of the jaw. The pain was described as of a gripping nature, and there was a sharp pricking sensation along the base of the tongue on the left. Occasionally, he obtained relief by squeezing the floor of the mouth and expressing a "little white plug," after which the pain and swelling would subside. His teeth had been very bad for years. He had pyorrhea alveolaris, and at the time of examination many teeth were absent and bridges had been inserted.

Examination.—There was a moderate swelling of the left submaxillary salivary gland, which was quite tender to pressure. In the floor of the mouth, well forward near the sublingual caruncle, there was a red, tender elevation which was distinctly fluctuating; no stone could be felt, however. Procain was injected over this area and an incision opened the distended Wharton's duct, permitting the escape of purulent material and a pyramidal calculus measuring 1.3 cm. in length. There was no opportunity for an attempt at securing a roentgenogram in this case. The relief was great and prompt, and the patient has remained well.

CASE 4.—*Salivary calculi (multiple); right submaxillary; removal of two calculi at two operations, from Wharton's duct* (Figs. 4 and 5).

History.—Emil G., Italian, aged 20, carpenter, admitted to the New York Hospital, Oct. 4 and Oct. 30, 1917, had had an attack four years before similar to the present, lasting about three days, but had had no trouble since then until eleven days before admission. While eating he felt pain in the right side of his throat and noticed a swelling below the jaw. This pain and the swelling subsided between meals, but promptly recurred when he ate solid food.

Examination.—There was a moderately enlarged right submaxillary gland. In the floor of the mouth, there was elevation along Wharton's duct; the sublingual caruncle was swollen and reddened, and by pressure over the duct some pus could be expressed.

Operation and Result.—October 4, a whalebone filiform bougie was quite readily passed into Wharton's duct for a distance of 7.5 cm., which must have carried it well back to the gland itself; but while the probe was being passed there was encountered some slight obstruction at a distance of 3 cm. After local anesthesia had been secured, the duct was split open along the probe and a yellowish, laminated calculus was removed measuring 5 by 3 by 3 mm. (Fig. 4).

The patient was readmitted three and one-half weeks later for a recurrence of the same train of symptoms. He stated that after the operation he was relieved for about five days, after which the pains and swelling at meal times recurred. October 30, under local anesthesia, the right Wharton's duct was again incised opposite the last molar tooth and a calculus of the same color and consistency as the first was removed, but it was more than twice as large as the first and measured 1 by 0.5 cm. These two calculi seemed to fit together very well, as if they had originally been parts of one calculus, and yet it is difficult to see how any trauma sufficient to break the calculus could have occurred at the first operation. Four months after operation, the right submaxillary gland was still very slightly larger than the left. The saliva seemed to be discharged in the floor of the mouth at the side of the tongue, where the duct had been split open. One and one-half years after operation, the patient was free from all symptoms.

CASE 5.—*Salivary calculi (multiple); right parotid* (Fig 6).

History.—Aaron B., aged 52, Russian storekeeper, admitted to the New York Hospital, April 20, 1916, and discharged, April 29, had been under dental treatment for pyorrhea alveolaris for the last five months; the teeth had been in very bad condition. Four months before admission he first noticed a swelling of the right parotid region which was very painful at times and seemed to vary in size. He had experienced a feeling of dryness in the right side of the mouth. For the last week the swelling and pain had been very much worse and constant, and he could not open his jaws.

Examination.—There was a very marked and tense swelling of the whole right parotid gland. In the buccal surface of the right cheek, the opening of Stenson's duct was found to be pouting and reddened and giving exit to creamy pus on pressure on the cheek. The whole tract of the duct felt indurated, but no definite calculus could be detected. A roentgenogram on a dental film placed inside the cheek showed a suspicious shadow of a small calculus.

Operation and Result.—April 20, a whalebone filiform bougie was passed into the right Stenson's duct and a gritting

3. This case was reported by the author in the Annual Report of the Presbyterian Hospital in the City of New York, 1906.

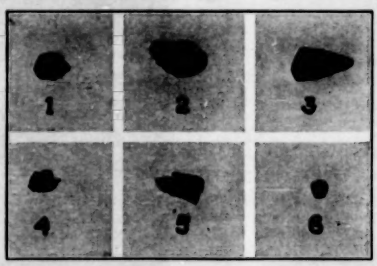
sensation was encountered at 3 cm. Under local anesthesia the duct was split open back to this point, but no calculus could be found. The symptoms persisted, and another effort was made to find the stone, April 24; but at this time there was still so much edema about the duct orifice that no probe could be inserted. April 24, a general anesthetic was given and a horizontal incision was made in the right cheek, exposing the dilated duct, but on palpation no stone could be felt, with the duct directly between the fingers. As it was not deemed wise to open the duct through the cheek, a loop of silk was passed about the duct, and the ends of the loop were pushed into the mouth through the buccal mucous membrane. The external wound was then closed by suture. The buccal surface was then exposed, and with the aid of the traction loop of silk the duct was easily drawn into view and a long incision made into it. A small curet was inserted, but no stone was found.

In this case, as the event showed, the multiple stones had evidently slipped well back into the parotid gland at this time.

On the third day after operation, the patient passed a small soft calculus about 3 by 4 mm., which specimen, unfortunately, was lost. On the sixth day after operation, while eating, he passed a second small and harder calculus about the same size, which is shown in Figure 6. After this there was a remarkably rapid abatement of the swelling, and complete disappearance of all symptoms. The patient remained entirely well during the six months that he was followed.

FREQUENCY OF THE CONDITION

From the various monographs on this subject and collection of case reports, it is fair to conclude that the lesion is rather rare. In 1890, Czygan collected from the literature the reports of about seventy cases. Futterer later raised this number to 160; Roberg[4] reviewed 207 cases; and from my own search of reports, I have found enough to make approximately 300, which will very fairly represent the total of cases reported up to this time. The French seem to have encountered or reported these cases more often than any other people.



Salivary calculi (actual size); 1 to 5 removed from Wharton's duct; 6 removed from Stenson's duct.

SITE OF THE LESION

In about two thirds of all reported cases, the calculus has been found in Wharton's duct or in the submaxillary salivary gland. In about 20 per cent., Stenson's duct or the parotid gland has been the site. Only in a considerably smaller number has the sublingual gland been involved. Certainly they occur very much more frequently in the ducts than in the glands.

ETIOLOGY

They usually occur in middle life; only one case is reported as occurring in infancy. The great preponderance of cases are in the male. As the result of inflammation of the duct, concretions may form about masses of bacteria, or salivary corpuscles, and very rarely about foreign bodies, e. g., bits of tartar. Foreign bodies which have been found occasionally occluding a duct include bristles from a tooth brush, bits of grain, and seeds. The lack of mouth cleanliness, and especially pyorrhea with tartar formation, afford the most likely source of duct irritation and inflammation.

SYMPTOMS

The classical picture of "colique salivaire" of the submaxillary region is that of intermittent swelling of the salivary gland, or of the duct behind the stone, accompanied by sudden severe pain in the floor of the mouth, tongue and side of the throat, all of which occurs during meals or may be excited by the mere sight of food. This tumor persists until there is a sudden discharge of saliva, which in a case reported by M. Reverchon would spout a jet of saliva, occasionally at meals, to a distance of from 30 to 50 cm. In some cases such a history runs back over a period of ten years or more; but in such cases the diagnosis should be very easily made. In many other cases the history is short, of a few months, or a few weeks or even of only a few days.

Cases which apparently start so acutely usually represent the intercurrence of an acute infection of the duct or gland and may be ushered in with acute swelling of the gland, with fever and much local inflammation; and it is here that the diagnosis becomes more difficult.

Pain is always more considerable when the stone is in the duct than when it is embedded in the gland. The general nutrition may suffer markedly because of the dysphagia. Purulent catarrh of the duct and even actual abscess about the duct is not uncommon. The enlargement of the gland due to the salivary stasis is usually of a chronic inflammatory character, resulting in connective tissue formation and atrophy of the gland cells; and only rarely is there actual suppuration in the gland itself, although it may remain permanently enlarged. Discharge of the stone into the mouth as the first symptom has been rarely reported.

DIAGNOSIS

A number of these patients present themselves to dentists believing that the swelling and pain near the jaw are due to the teeth. And, indeed, an alveolar abscess may be suspected. More of the acute cases are likely to be diagnosed as cases of suppurative lymphadenitis, and treated by external incision. In the cases of chronic enlargement of the gland, malignancy may be suggested.

Examination of the floor of the mouth or cheek will usually show some change at the exit of the duct, a purulent discharge or swelling and redness. There may be a visible swelling along the course of the duct, or bimanual palpation may reveal a cystic mass or even the actual presence of the calculus. In my experience with Wharton's duct, the stone is very likely to be found rather far back, about opposite the last molar tooth.

Probing the duct requires some application and perseverance, but may yield the convincing sensation of "gritting" against the stone. I have found that a whalebone filiform bougie is well adapted for this pur-

4. Roberg, O. T.: Sialolithiasis, Ann. Surg. **39**, May, 1904; abstr. J. A. M. A. **42**: 1662 (June 18) 1904.

pose and likely to be more readily obtainable than the very small metal probes which would be necessary.

TREATMENT

After local anesthesia of the vicinity of the duct, one of two methods may be used: First, a probe is inserted and the duct split back as far as may be necessary to deliver the calculus, which may require a spoon curet. Second, a direct incision may be made through the mucous membrane and into the duct at the site of the previously located stone, or into the distended duct behind the stone, or on a probe in the duct.

In the event that the stone has slipped back and cannot be found, the splitting or incision of the duct may permit of its spontaneous delivery within a few days, without further intervention.

Mathews [5] says that one should be on the lookout for multiple stones, which were present in two of the six cases that he reported, and in two of our cases.

Results are very satisfactory if the obstruction is found and removed, and recurrence is very rare unless a bit of calculus has been left in situ. External incisions are seldom if ever indicated, and are to be avoided.

134 East Sixty-Fourth Street.

RHINOPHYMA

A CURE BY A PLASTIC OPERATION WITH A GOOD COSMETIC RESULT

JAMES FRANCIS GRATTAN, M.D.
NEW YORK

Operative removal of rhinophymas has not offered much encouragement to surgeons, judging from the meagerness of the reports on the subject in the literature. The lobular nature of these tumors, with broad bases requiring extensive denudation for removal, and the difficulty of obtaining a satisfactory cosmetic result, without prominent scarring, are factors that have been largely responsible for the discouragement.

My patient was no exception. He had had this disfiguring mass for more than fifteen years. During that time he had consulted surgeons frequently concerning its removal, but none, as he put it, "cared to tackle the job." [1]

As can be seen in the accompanying illustrations, the base of the tumor occupied the lower third of the nose, anteriorly and laterally, while the tumor itself protruded forward and downward. To me it offered hope of removal with a reasonably good cosmetic result. I felt that the man was so disfigured by the tumor that he had little to lose. His confidence was encouraging, so we decided to assume the risk together.

REPORT OF CASE

History.—M. G., man, aged 43, single, dated the initial change in the tip of the nose to his tenth year, when, he said, the end of the nose was severely lacerated by a dog bite. He did not recall whether or not there was infection present at that time. At 11 or 12 years, the patient had facial erysipelas involving the cheeks, eyelids and nose. This attack kept him in bed for two weeks. During his youth he sustained several bad blows and falls involving the nose.

Two and a half years before we saw him he had had a second attack of facial erysipelas. The venereal history presented nothing of interest in relation to the local condition.[2]

Physical Examination.—The patient was of medium build and, aside from the nasal tumor, apparently without lesions, deformities or organic disturbances. There was a globular tumor about 1¼ inches in diameter, almost a perfect sphere, with a base almost as broad as the diameter of the mass, and extending upward on the anterior surface to the junction of the middle and lower thirds of the nose, and laterally to the anterior borders of the alae nasi. Chronic acneform lesions (comedones and sebaceous cysts) dotted the skin over the entire tumor surface and involved the skin of the rest of

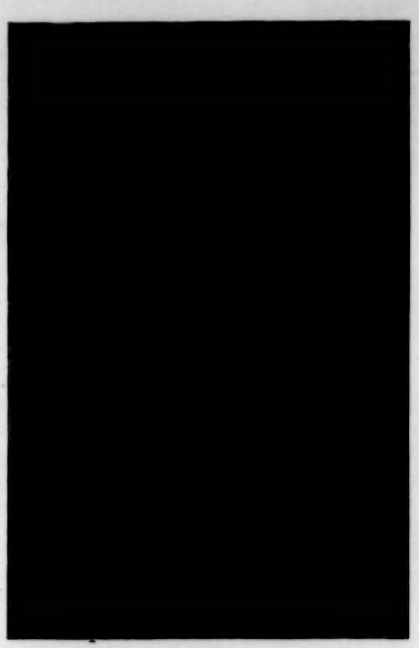


Fig. 1.—Lateral aspect of the tumor.

the nose and the adjacent parts of the cheeks. These lesions are evident in the illustrations. The skin of the tumor was leathery and firmly attached, but of normal color.

Operation and Results.—One-quarter grain of morphin, with 1/150 grain of atropin, was given forty-five minutes before the operation. The entire face was cleansed with naphtha to remove the excessive sebum, and subsequently wiped with 95 per cent. alcohol, followed by ether. A sterile dressing was applied and left in place until the patient was brought to the table. The skin, including the forehead, nose, cheeks and upper lip, was then painted with 2 per cent. iodin. The surface deposit of iodin was wiped off with 95 per cent. alcohol. Twenty-five per cent. argyrol was dropped in the eyes and nostrils, and the mouth was painted with the same solution. Moist, sterile towels were draped over the

5. Mathews, F. S.: Submaxillary Calculi, Ann. Surg. 63:140 (Feb.) 1916.

1. The patient was referred to me by Dr. Daniel O'Leary, of Newburgh, N. Y. Dr. O'Leary and I had intended to operate on this man at Newburgh but owing to Dr. O'Leary's disability, by reason of an infected finger, he sent the patient to New York, fearing that he would change his mind about being operated on.

2. The history of repeated traumas and infection is of value only in the vague sense in which are associated repeated irritation and tumor growth.

surrounding areas, and the patient was instructed to breathe through the piece of sterile gauze placed over the mouth. Two per cent. procain was infiltrated at the alae, columella and across the nose above the tumor.

A U-shaped flap was made above, beginning at each ala and including about one-half inch of the skin on the superior surface of the tumor mass. An inverted U-shaped flap was made on the inferior surface of the nose, including the skin of the entire inferior surface of the tumor. The ends of the two U-shaped incisions were made to meet at each alar crease. The flaps thus outlined were dissected off the tumor with considerabe difficulty, both because of the leathery quality of the skin itself and because of its firm attachment, or rather inclusion in the tumor. The skin flaps having been freed, the tumor was dissected in a wedge-shaped manner from the underlying nasal cartilage. There was considerable fibrous tissue in the tumor and no distinct differentiation between the tumor and nasal structure. The dissection was rather difficult on account of these conditions. Considerable bleeding of both arterial and venous character was encountered. This was controlled by suture-ligatures of fine catgut. The inferior flap proved one-fourth inch too large and was trimmed to fit

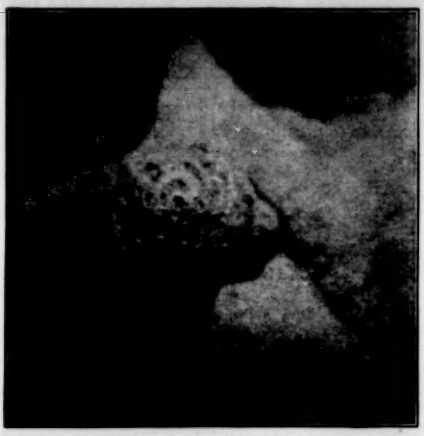


Fig. 2.—Anterior aspect of the tumor.

the upper flap. The lower flap was rolled up over the edge of the nose so that the suture line ran directly across the anterior surface of the nose from ala to ala. The upper flap was very difficult to adapt to the new contour, as it had stood out at a right angle to the anterior nasal line during the long period that it had performed the function of covering the upper surface of the tumor. The adaptation was begun by fastening it at its center to the center of the lower flap and then adapting the sides by trimming and scoring the edge, fitting and refitting several times, until the best possible approximation was obtained. In this way a rather well-shaped nose was molded out of very discouraging material. Interrupted sutures of fine silk were used. These were removed on the fourth day. The tension was relieved by sterile adhesive straps. The result one month subsequent to operation is shown in Figures 3 and 4.

The wound healed by primary union and the patient left the hospital on the tenth day. Aside from slight redness and the prominence of the sebaceous gland orifices, the nose had the appearance of a normal organ. The problem of improving the condition of the skin was discussed in consultation with Dr. Fred Wise. Dr. Wise suggested the use of 50 per cent. trichloracetic acid, applied periodically, until the higher prominences of the skin were leveled. The appearance of the nose after the first application of this acid had completed its good work is shown in Figure 3. The whiter, smoother areas represent the portions thus treated. This treatment was repeated until all areas of the nose had been smoothed out, and the

Fig. 3.—Lateral aspect after plastic operation.

result is most satisfactory. Four applications were made in all. Subsequently, exposures of the roentgen ray at three week intervals were given with the idea of further improving the condition of the skin and keeping in abeyance any tendency to recurrence of growth in the tissues treated.

Fig. 4.—Front view after operation.

PATHOLOGY

According to the best dermatologic opinion, rhinophyma is a further developmental stage of acne rosacea. Because of the persistent hyperemia and

irregular periodic aggravations, the vessels become permanently enlarged. A hypernutrition of the skin results. The sebaceous glands hypertrophy first as gelatinous nodules, later becoming fibrous. Acne lesions are sometimes superadded. The markedly hypertrophic forms are due to new connective tissue growth, amounting to a real hyperplasia. Follicular suppuration with new connective tissue formation results in distention of the veins, so that they amount to actual sinuses. In this case the prominent pathologic features were the marked acneform lesions of the surface (comedones and small sebaceous cysts), the excess of fibrous tissue rendering the mass firm and elastic, and the prominence of the blood vessels, particularly the veins.

The result has been most satisfactory to the patient and to me, and there is no reason to believe that the nose will not remain in its present good condition. The illustrations reveal more clearly than any description the complete change in the physical appearance of the face. The condition of the skin has improved greatly since that represented in Figure 3, as a result of the trichloracetic acid treatment.

COMMENT

To me this case demonstrates the desirability of attempting something for the improvement of conditions of this type. It is impossible to estimate the good effect of the result on the patient's mentality and outlook on life, to say nothing of the physical betterment.

24 West Fifty-Ninth Street.

HYPERTRICHOSIS

REPORT OF CASE

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NEW YORK

Hypertrichosis is either an abnormal or an excessive growth of hair. In some cases the hairs may be increased in size; in others, the number of hairs may be increased, or both conditions may be present. This abnormality may either be referable to the location on the patient's body or dependent on the age or sex of the individual. There may be either a racial or a family predisposition to this condition. Brunettes are more prone to hypertrichosis than blondes.

This anomaly is classified as acquired and congenital. The acquired type is generally not an extensive condition; it may be universal or partial—usually the latter. An example of the partial is the growth of a beard on a female subject. The congenital condition is comparatively rare. An example of the universal type was Jo Jo, the dog-faced boy, whose face resembled that of a terrier and whose body was covered with soft hair. The congenital variety is usually of the partial type, and often manifests itself as a hairy pigmented nevus. A favorite location for this is at the lower end of the spine over the sacrum. The case here reported is of the congenital partial type.

It is unusual in that so far as macroscopic examination can determine, the hair is growing from perfectly normal skin, indistinguishable from the adjoining skin where the hair is present.

REPORT OF CASE

M. S., woman, aged 30, housewife, married, Italian, with negative family history, was born with a growth of soft hair a few inches long, situated over the small of the back. This hair gradually increased in length and became coarser, so that it is now similar to the hair of the head, though the texture of this hair is a little softer. The color is the same as that of the head, a dark brown. The hair is growing from a perfectly normal skin; there is no pigmentation; no hypertrophy of the skin or other sign of nevus is present. For the last eight or ten years the patient has cut off this hair about every twelve months. The hair now present is 8 inches long and has been growing for one year. The growth has never been much longer than at the present time. The area covered by the hair has a diameter of from 4 to 5 inches.

Area of hypertrichosis.

The condition described was accidentally discovered while the patient was being given an intramuscular injection of mercuric salicylate for syphilis. A roentgenogram of the lower end of the spine is negative. The patient is of a highly neurotic type.

133 East Fifty-Seventh Street.

Clinical Notes, Suggestions, and New Instruments

A NEW BLOOD COAGULOMETER *

GEORGE KING, M.D., AND H. A. MURRAY, JR., M.D., NEW YORK

Authorities on blood coagulation, including Howell, Morawitz, Lee and Hurwitz,[1] have asserted that only clotting tests in which the blood is collected by venipuncture can be depended on to give reliable results. Blood taken from a finger prick is unavoidably mixed with more or less tissue fluid, which apparently precipitates the clotting process even in cases in which the power of the blood to form a gel is known to be impaired. Therefore, it seems that if tests made in this way are relied on many hemorrhagic conditions will go undiagnosed. Not long ago there was a "bleeder" in the wards of the Roosevelt Hospital who repeatedly gave a normal clotting time with blood drawn from finger stabs. Although hemophilia was suspected, it was only when venipuncture was resorted to that confirmatory evidence of this disease was obtained.

Last spring in doing some work which involved clotting determinations, we had occasion to study this subject. It was found that in 1911, Solis-Cohen had summarized the results of more than thirty different tests reported in the literature.[2] But because in all of them blood from finger pricks was used, they had to be disregarded and attention directed solely toward procedures calling for venipuncture. We tried the more suitable ones described in various publications and also had the opportunity to interrogate Professor Howell, who

* From the Laboratories of Surgical Research, Columbia University College of Physicians and Surgeons.

1. Howell W. H.: The Condition of the Blood in Hemophilia, Thrombosis and Purpura, Arch. Int. Med. **13**:76 (Jan.) 1914. Morawitz and Burich: Arch. f. exper. Path. u. Pharmakol. **58**:115, 1907. Lee, R. I., and White, P. D.: Am. J. M. Sc. **145**:495, 1913. Hurwitz, S. H.: Am. J. M. Sc. **154**:689 (Nov.) 1917.

2. Solis-Cohen, Myer: The Coagulation-Time of the Blood as Affected by Various Conditions, Arch. Int. Med. **8**:684 (Nov.) 1911; ibid **8**:820 (Dec.) 1911.

admitted the uncertainty of prevailing methods. As an example, he told how on one occasion blood drawn by venipuncture into a hypodermic syringe containing a few drops of physiologic sodium chlorid solution, and then divided equally between two similar test tubes, had clotted ten minutes faster in one test tube than in the other. At the Presbyterian Hospital, New York, the coagulation time of the blood is usually tested by allowing it to drop freely into a paraffin-lined test tube from a Luer needle introduced into the median basilic vein. The instant at which the tube may be completely inverted without dislodging the clot is considered the end-point. Normal figures by this method have been found to vary from four to twenty-seven minutes.

In our own experiments, we were not able to attain conformity of results with any methods examined, no matter how carefully the instructions were followed. The tube pictured in the accompanying illustration was then devised, and has given more consistent findings in our hands than have other procedures. The tests were performed largely on dogs, whose blood is very readily collected by puncture of the external saphenous vein. In more than thirty tests, with one exception, all the samples of blood from animals in apparent good health clotted in between nine and twelve minutes. The average was ten and one-half minutes. Any technic, however, seems to be relatively accurate when employed repeatedly by the same man, particularly when that man has devised the test himself. The sense of proprietorship apparently calls for thoroughness and devotion to detail which finally leads to a technical precision impossible under less stimulating circumstances. To avoid this possible personal element and properly to subject this instrument to trial, tubes were distributed among a few hospitals and tested without any special care or previous experience by various interns and medical students. The tubes were accompanied by these instructions:

Blood coagulometer.

METHOD FOR TESTING COAGULATION TIME OF THE BLOOD

The coagulometer to be used is composed of the following separate parts:

1. Glass tube, length 9 cm., inside diameter 9 mm. (A line to indicate the level taken by 2 c.c. of fluid within the tube is etched on the glass.)

2. One-way stopcock.

3. Luer needle with wire inserted, length 1 inch, gage 20. (These may be purchased from James W. Dougherty, 413 West 59th Street, New York City.)

A. *Preparation of Coagulometer.*—The tube is *thoroughly cleansed* with potassium dichromate cleaning mixture and then rinsed out with water, alcohol and ether in the order named. When it has become absolutely dry its upper wide open end is *plugged with cotton.* (The cleansing is usually done immediately *after* a test, and the tube kept in a glazed envelop or desiccator ready for use. It is important that the inner surface of the tube be smooth and *absolutely clean,* as little specks of dust make a difference in the clotting time.)

After the Luer needle in a test tube has been sterilized in the autoclave, attach it to the stopcock and the latter to the glass tube. Open the petcock. The coagulometer is now ready for use.

B. *Procedure.*—The skin overlying the vein of the patient to be punctured is sterilized with iodin. (One of the veins at the elbow is usually selected, and in that case the arm of the patient is hung over the edge of the bed.)

Put in plain sight a watch with a second hand, and note the time of applying the tourniquet. After thirty seconds, enter the vein from above downward, with the stopcock of the coagulometer open. When blood first appears in the tube, record the time. During the procedure the tube is kept in a vertical position with the lumen of the needle in the direct current of the vein. (It is believed that the ease and speed with which the vein is entered is an indeterminate variable personal error of some consequence. Therefore, if there is difficulty in entering the vessel, the needle should be changed and a second attempt made with another vein.) When the blood has reached the 2 c.c. mark, shut off the flow by turning the stopcock.

Remove the instrument from the vein, separate the needle, and stand the tube with attached stopcock in a rack or vessel for six minutes. (This should be done quickly and evenly. Do not tip, twist or shake the tube.) If the temperature of the room does not lie between 65 and 90 F., the tube should be kept during the test in a water bath whose temperature is maintained at about 75 F.

The coagulation time is the time elapsing to the nearest one-half minute from the instant blood first appears to the moment when the tube may be gently but completely inverted without displacing the clot from its bottom. After six minutes have elapsed, test the tube every minute until the blood shows signs of clotting; then test every one-half minute. After twenty-five minutes, if the blood has not clotted, test every five to ten minutes.

In testing, one should avoid breaking the surface clot by rough handling or extreme tipping. At first the tube need only be tipped to the slightest degree to make the fluidity of the blood clearly apparent. It should not be upset until it is quite evident by holding it in the horizontal position that it will not be disturbed by this maneuver.

After completing the test, the needle and stopcock should be cleared of fibrin threads and other matter by the use of a wire, followed by rinsing in hydrogen peroxid, alcohol and ether in the order named. If the stopcock does not turn easily after the washing, add a drop or two of xylene (xylol).

RESULTS

As was expected, the results obtained from these various sources were not uniform, but under the circumstances they were considered satisfactory. At Roosevelt Hospital, twenty supposedly normal patients were tested. The coagulation time varied from eight and one-half to fifteen minutes. The average was eleven minutes. The time in fourteen cases was between nine and eleven and one-half minutes. In three cases of jaundice the time was eighteen, twenty-two and twenty-eight minutes, respectively. Only a few results were received from the Presbyterian and Bellevue hospitals, but the time in all of these in which the proper technic was observed was between the outside limits (eight and fifteen minutes), and averaged about eleven minutes. The results from all our estimations, animal and human, show that, by this method, ten and one-half minutes may be considered the average time for clotting, with eight and fifteen minutes as the outside limits.

ADVANTAGES

The method here presented seems theoretically to allow for nearly the minimal personal error. It is simple, and practically has given rather consistent findings. The end-point, of course, is indefinite; but until the physicochemical mechanisms involved in blood coagulation are discovered, a completely satisfactory test need hardly be expected.

PREGNANCY IN THE RUDIMENTARY HORN OF A BICORNATE UTERUS

GEORGE L. BRODHEAD, M.D., NEW YORK

DeLee[1] states that pregnancy in the rudimentary horn of a bicornate uterus resembles ectopic gestation very closely, the first case being recorded by Mauriceau and Vassal in 1669, since which time more than 100 cases have been reported. The rudimentary horn may be closed at either end, making pregnancy impossible but accumulation of menses probable. Should the fertilized ovum be inserted in the small horn, there is no hope of reaching the uterus, because the connecting bridge of tissue is usually imperforate. The ovum may grow to term, but the gestation sac usually ruptures in early pregnancy, and severe internal hemorrhage follows.

REPORT OF CASE

History.—A quintigravida, aged 30, had had four normal confinements, the last of a half hour's duration. The present pregnancy had progressed to about the eighth month, the only symptom being occasional pain in the left hypogastrium. On the day of admission to Harlem Hospital, there had been slight pain in the left half of the abdomen at 7 a. m., and the patient complained of slight occasional pains up to the time of her admission at 2:30 p. m. No life had been felt for two days before admission, and the midwife who was called in diagnosed death of the fetus, for which reason the patient was referred to the hospital. At about 3 p. m. she was apparently in good condition, but at 3:15 she was found in shock, pulseless. My associate, Dr. Langrock, who saw the patient first, gave 1,200 c.c. of saline solution intravenously, but the condition of the patient when I arrived a

1. DeLee, J. B.: Principles and Practice of Obstetrics, Ed. 3, Philadelphia, W. B. Saunders Company, 1919.

short time afterward was desperate, and in a few minutes she died. Abdominal palpation revealed a fetus apparently free in the abdominal cavity, and the cervix was soft and closed. A diagnosis of ruptured abdominal pregnancy was made, and a postmortem abdominal section was performed.

Fig. 1.—Anterior view of the uterus, which is seen to the left, with the normal right ovary and tube, and the fetal sac to the right. The membranes can be seen attached to the edge of the placenta, a portion of which is visible on the extreme right. The small slit in the right side of the fetal sac is the point from which Section 2 was taken. The fimbriated extremity of the left tube is seen extending downward and to the left from the fetal sac.

Necropsy.—A large amount of blood, with the child, was found in the abdominal cavity. The child weighed 4¾ pounds and was dead, though showing no maceration. It was impossible to determine the exact variety of pregnancy without thorough microscopic examination of a number of sections, and this has been done for me by Drs. Strong and Schwarz of the Woman's Hospital.

Diagnosis: Their diagnosis was: uterus bicornis, with rudimentary horn and pregnancy of approximately eight months' duration in this horn (decidua in the uterus, corpus luteum of pregnancy in left ovary).

Fig. 2.—Posterior view of the uterus, which has been incised, and the small pedicle connecting it with the fetal sac. The fimbriated extremity of the left tube is again seen in the lower portion of the illustration, with the ovary just above. The fetal surface of the placenta is to the left of the depression in the middle of the fetal sac, and the umbilical cord is seen attached to the placenta at the upper left angle of the illustration.

Macroscopic Examination: The corpus uteri was asymmetrically developed and measured 10 by 5 by 4 cm. The adnexa of the right side showed no gross changes. On the left side of the uterus there was a pedicle of about 5 cm. length and 1 cm. diameter attached to the side of the uterus at the level of the internal orifice. This pedicle connected a fetal sac of approximately 18 cm. diameter with the uterus. The ovary and fimbrial extremity of the tube of this side (left) were found attached to the fetal sac. The fimbriated extremity was perfectly free. The ovary contained a large, fully developed corpus luteum. The fetus measured 40 cm. in length, and was well preserved. The amnion showed a large lacerated opening through which the fetus with cord escaped into the abdominal cavity.

Microscopic Examination: Section 1, taken from a structure which appeared to be the round ligament, showed a lobulated muscle bundle (round ligament).

Section 2, taken from the fetal sac, showed uterine musculature with a small number of round cells and syncytial wandering cells. It also showed the decidua spongiosa without any fetal elements.

Section 3, taken from the right tube corner, showed muscular ligament tissue.

Fig. 3.—Cross-section of rudimentary horn of bicornate uterus (Section 5).

Section 4 showed the fimbriated extremity of the left tube, normal. No tube could be found on the left side.

Section 5, taken from the pedicle dissected out of its cover of broad ligament, showed three strata of smooth musculature, circular and longitudinal, the inner layer showing a marked decidual reaction. The center of this musculature layer contained a narrow circular lumen which was lined with a single row of cylindric epithelial cells.

INTERESTING FEATURES OF CASE

1. The patient had been pregnant four times in the right horn of the uterus before becoming pregnant in the rudimentary left horn.

2. The left ovary contained the corpus luteum of pregnancy and there was a well marked fimbriated extremity of the left tube, but no tube could be discovered.

3. The uterus appeared to be no larger than the usual size before pregnancy, and seemed to have developed chiefly from the right müllerian duct.

50 West Forty-Eighth Street.

FOLDING CHAIR FOR SPINAL PUNCTURE

NORMAN E. WILLIAMSON, M.D., STOCKTON, CALIF.
Pathologist, Stockton State Hospital

The chair that I described recently in THE JOURNAL[1] is not readily portable; and as I had to perform spinal punctures away from the operating room, I devised a folding chair that

Chair for spinal puncture, folded and open.

can be easily taken in the automobile. The inconveniences and dangers of the old method are emphasized when one has become accustomed to using the chair for spinal puncture.

At the right in the accompanying illustration the folding chair is open with half the braces in position; the other braces are set at an angle to show the method of adjustment. The chair weighs 33 pounds.

One point should be emphasized: The angle of flexion of the thighs on the pelvis when the patient is in the chair prevents any forcible movement of the thigh and assists greatly in steadying the patient.

ABDOMINOTHORACIC WOUND WITH EVISCERATION OF SPLENIC FLEXURE

FRASER B. GURD, B.A., M.D., MONTREAL

This report of a soldier who came under my care in June, 1919, is of more than usual interest, both as regards the extensive interference to which his gastro-intestinal tract has been subjected, and as regards the repair of a severe injury of the left diaphragm.

History.—Private A. G. P., aged 37, was wounded, Oct. 2, 1918, by a large shell fragment which tore through the lower portion of the left chest, destroying about 5 inches of both the seventh and eighth ribs in the axillary line. The diaphragm was torn and the splenic flexure protruded through the opening. At the primary operation performed at the clearing station, the loop of splenic flexure was opened and the pleural and peritoneal cavities were closed. This opening in the splenic flexure acted as an artificial anus until November 11, when a laparotomy was performed, the ileum divided and the distal end closed, and the sigmoid divided and proximal end closed. An end-to-end anastomosis between the ileum and the distal portion of the sigmoid was performed, with a view to short-circuiting the artificial anus.

1. Williamson, N. E.: A Chair for Spinal Puncture, J. A. M. A. 74:602 (Feb. 28) 1920.

November 30, the patient developed acute obstruction. At operation a large pelvic abscess was found with much matting of loops of small intestine. These were separated, and the abscess was drained. A lateral anastomosis between the ileum and the transverse colon was performed, as there was doubt regarding the free passage to the anus, and the small intestine was greatly distended. Convalescence was uneventful. The bowels moved chiefly by rectum.

Condition on Admission.—When the patient entered St. Anne's Military Hospital, June 22, 1919, his general condition as regards nutrition was fair, and his color good. Mentally he was very dull and melancholy. It seemed to be impossible for him to think of anything other than the fecal discharge from his side. With the exception of marked limitation of respiratory effort of the left side of the chest, and diminished breath sounds, examination of the chest was negative. Examination of the abdomen revealed separation of the right rectus muscle at the site of a long laparotomy incision. At this point there was bulging. In the center of the weakened area the muscle was separated 7.5 cm. Over the lower part of the left lower costal area, in the axillary line, there was a large scarred area approximately 16 by 20 cm. in diameter, in the center of which there was an elliptic scar covered by mucous membrane 10 by 7 cm. in size. On examination with the finger it was possible to enter the bowel at two points, the one opening entering the distal portion of the transverse colon, the other the proximal portion of the descending colon. Portions of the seventh and eighth ribs were apparently missing.

The patient was wearing a special corset, both for the support of the abdominal hernia and to retain the dressing over the discharging anus. Approximately one quarter of the fecal discharge escaped into the flank, three quarters being passed normally. The fecal discharge from the side was practically free from odor, and caused no excoriation of the skin.

Despite the fact that the papers accompanying the patient from England advised strongly against further operative interference, it was determined that in view of the intolerable condition in which the patient found himself, his discharge

Fig. 1.—Condition of patient before operation.

from the army in this state without some further attempt to improve his condition should not be accomplished.

Operations and Result.—August 6, an incision was made along the mucocutaneous border encircling the protruding intestine, which was dissected from the underlying tissue. The posterior surface of the intestine was found to be covered by peritoneum with the mesocolon intact. Above, the pleura was fixed to the deep surface of the protruding intes-

tine, and below, the peritoneum was likewise attached. Both pleural and abdominal cavities were opened and packed off. It was found that the mesocolon was replacing the diaphragm, and hence divided the pleural from the peritoneal

Fig. 2.—Condition of patient on discharge.

cavities. The splenic flexure was cut across, and the proximal end closed by a Connell suture and invaginated by a double purse string. The stump of the proximal colon was sutured to the parietal peritoneum. The distal segment of the intestine was pulled well out of the wound and wrapped

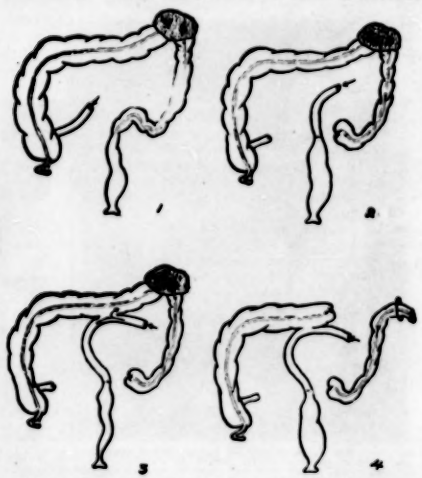

Fig. 3.—Course of intestinal contents after: (1) original wound; (2) first short-circuiting operation; (3) second short-circuiting operation, and (4) closure of artificial anus.

in paraffin gauze. The parietal peritoneum was separated somewhat from below and sutured to the cut edge of the mesocolon. The pleura was sutured to the upper edge of the mesocolon, thus reestablishing the mesocolon as an artificial diaphragm. Poorly nourished scar tissue surrounding the original artificial anus was excised. As a result of this removal of scar, and more particularly as the result of the removal of the bowel from the opening, all sutures were found to be under great tension. In order, if possible, to prevent the breaking down of the wound and the opening of both pleura and peritoneal cavities, double No. 4 chromic catgut was passed above the fifth and below the eighth ribs. The patient was postured so as to bring these ribs into as close contact as possible, and the sutures were pulled tight. Following this procedure, the entrance of air into the pleural cavity was arrested.

A flap of skin and subcutaneous tissue with its pedicle behind was turned down from the upper part of the chest and sutured over the operation area. The corners of the denuded area were sutured to prevent retraction. A small paraffin gauze drain was passed beneath the flap of the skin to the proximal stump of the intestine, and the denuded area was covered with a bismuth iodoform petrolatum paste dressing. The wound was dressed at four day intervals.

The transplanted flap healed by first intention. On the tenth day the sutures were removed. The site from which the flap was removed was found covered with healthy granulations. The general condition of the area operated was found to be very satisfactory.

On the seventh day following operation the patient, who at all times was difficult to control, walked for his midday meal, a distance of half a mile to the Red Cross hut.

Fig. 4.—Operative field.

August 29, a radical repair of the abdominal hernia was performed. The raw surface of the chest was grafted (Thiersch). The free end of the colon was excised, and the free edges were sutured to the abdominal wall.

September 9, the abdominal sutures were removed. There was a practically complete "take" of the skin graft. After the operation the patient's condition was very satisfactory. By October 15, on which date he went on leave, he had gained 17 pounds, and was bright and mentally alert.

Condition on Discharge.—On discharge from the service, Dec. 1, 1919, he had gained 30 pounds, and will apparently make a useful citizen. A small patch of mucosa representing the upper end of the splenic sigmoid pouch is discharging very little mucus. A roentgenogram demonstrates that no barium enters the ascending or transverse colon. There is marked limitation of respiratory effort on the left side. The patient is free from pain, discomfort or digestive disturbance, and he no longer finds an abdominal support necessary.

115 Stanley Street.

Loss of Health.—The transition from vigor to health, from health to impairment, and from impairment to disease is gradual, almost imperceptible. The loss of vitality does not take place abruptly, suddenly, in ways that stagger and arrest one's attention, but our vital losses, like our financial losses, are in driblets, in pennies, nickels and dimes, and occasionally quarters. And in the one case, as in the other, we do not become alarmed until our surplus is dangerously drawn on.—W. S. Rankin, *Tr. Assn. Life Ins. Presidents*, 1919.

A NEW TONSIL INSTRUMENT

J. G. ROHRIG, M.D., BENNETT, IOWA

The tonsil enucleator is not a snare, nor is it a cutting instrument or a guillotine. It has a dull blade with an oval shaped opening. The ring encircling this opening is an incomplete one having a 5 mm. gap in its lower part, as shown at *A* in Figure 1. This gap is hidden, and the ring a complete one when the blade is in the position shown at *B* in Figure 1. By this gap the enucleator may be hooked over the tonsil forceps while the latter keeps its grasp of the tonsil, as shown in Figure 2. The handles are then pressed until the catch on the lower part of the channel supporting the blade is felt to engage the notch on the lower edge of the blade. The ring is now again a complete one encircling the tonsil forceps, as in Figure 3.

Fig. 1.—Tonsil enucleator: *A*, gap for passing over tonsil forceps; *B*, position when gap is hidden and ring is ready for passing over tonsil.

The tonsil being held by a good grasp of the forceps secured before the dissection of pillars is begun, the enucleator is instantly placed in position, as shown in Figure 3. The ring is passed well down behind the superior lobe of the tonsil while the distal part of the ring is brought well out to include the inferior lobe, or pole. By pressure of the handles the dull blade is moved, and the entire tonsil with its capsule is peeled out with as little injury to blood vessels and tissues as is possible. The distal part of the blade can be passed well outward to include the inferior pole of the tonsil, while a wire loop cannot be passed beyond even a slight obstruction. The first grasp of the tonsil by the tonsil forceps should be sufficiently deep to engage the fibrous trabeculae, which gives a good bite that will not tear out, and no further laceration or grasping of friable superficial tissue is needed. With a good bite, the pillars are dissected, the upper and anterior part of the tonsil with the capsule is loosened, the enucleator is applied and placed to include the lower pole, and the operation completed without a second grasp. Even after it is constricting the tissues, the enucleator may be instantly removed from the throat, if it is desired to dissect a pillar. The little dissection may be done, and the enucleator replaced instantly. This cannot be done with a wire loop. Not only does the dull blade better follow the irregularities of the capsule than does a sharp edge or a wire loop, but, in addition, the crushing division by the dull blade is followed by less bleeding, and less opportunity for organisms to gain entrance to the circulation, than if division of tissue were by sharp edge or wire.

Fig. 2.—Tonsil enucleator being hooked over tonsil forceps.

Fig. 3.—Completed ring after tonsil enucleator has been placed over forceps; handles are pressed until it is felt that catch has engaged notch.

This method does not require outward pressure in the direction of the angle of the jaw to bring the tonsil into the ring of the instrument, and therefore the surrounding tissues are not traumatized. Trauma to these structures is not desirable, especially if active organisms are present at the time.

A NEW AND EASY METHOD FOR DEMONSTRATING SPIROCHAETA PALLIDA

S. D. COFFIN, A.B., M.D., SEATTLE

A piece of passe-partout or black paper, the size of a quarter, pasted on the bottom of the Abbé condenser of the ordinary microscope will facilitate the making of dark field examinations for *Spirochaeta pallida*. I have employed this method for the last six months, and found it even better than the regular "dark field" attachment sold for the purpose.

A hooded light of 100 watts, about 8 cm. above the work bench, is employed. A piece of black passe-partout binding, the size and shape of a quarter, is pasted on the center of the lower (convex) surface of the Abbé condenser, the top of which should be level with the top of the stage of the microscope. The high (4 mm.) objective is used. The specimen should be thin, and evenly distributed between the coverslip and the slide. Care should be taken to wash the lesion only with cold water. Strict instructions should be given to the patient not to put any medicines, even soap, on it until the diagnosis is made, for even the mildest antiseptics make it impossible to find the spirochetes.

Fig. 1.—Method for demonstrating Spirochaeta pallida: *A*, side view of Abbé condenser; arrow points to black paper; *B*, bottom view.

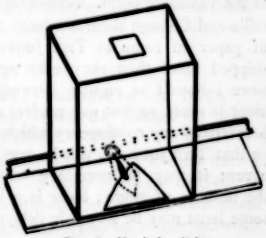

Fig. 2.—Hood for light.

Heavy liquid petrolatum is used between the slide and the upper surface of the condenser. Oil should not be used on the upper surface of the specimen, that is, the high, dry lens should be used.

The light is regulated with the lower shutter of the condenser till the field looks like the clear sky on a moonless night. Two fields will be found; one should rack slowly through the first field to the second, where *Spirochaeta pallida* will be beautifully demonstrated.

201-204 Yale Building.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION.

W. A. PUCKNER, SECRETARY.

ACETYLSALICYLIC ACID (See New and Nonofficial Remedies, 1920, p. 247).

Acetylsalicylic Acid-Heyden.—A brand of acetylsalicylic acid complying with the N. N. R. standards.

Manufactured by the Heyden Chemical Works, Garfield, N. J. No U. S. patent or trademark.

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SATURDAY, MAY 22, 1920

It is unnecessary to remind our readers that periodical publishers are at present living under a sword of Damocles. In this instance the sword is "paper shortage." It has been the rule of THE JOURNAL to keep a six to eight weeks' supply of paper on hand in order to be ready for emergency, but, because of freight difficulties, this reserve has gradually dwindled almost to the vanishing point. Somewhere between the paper mills and Chicago there are more than a hundred tons of paper en route to THE JOURNAL. One car was shipped more than six weeks ago and others have since followed at regular intervals. This announcement is made so that our readers may have explained beforehand any contingency which may occur: It may be that THE JOURNAL will be sent out in a thin paper cover; it may be necessary temporarily to reduce the number of pages; there is a bare possibility that some issue may be seriously delayed.

BEE POISON

The mention of animal poisons—so-called zootoxins—is likely first of all to bring to mind the venoms of snakes. This type of highly toxic substances has been extensively investigated, notably by Flexner and Noguchi [1] in this country. The effects produced by venoms are varied and undoubtedly due to a number of distinct components, including hemotoxins (that is, hemolysins and hemagglutinins), neurotoxins, endotheliotoxins and leukocytolysins. Their precise chemical nature has not yet been ascertained. In addition to these harmful products, practical medicine has to deal with the poisons of various insects: scorpions, spiders, centipedes, ants, wasps and bees.[2]

Bee poison is probably encountered most frequently. Fatal intoxication in man as a result of the sting of bees is by no means unknown. The bee poison has awakened the interest of investigators, not merely because its effects need frequently to be counteracted in persons who have been stung, but also because it formerly acquired some reputation as a therapeutic product, with a history of many years' standing. The sting of bees has been recommended in many parts of the world, usually as a suggestion of popular lay therapy, for palliating a great diversity of disease conditions, among which rheumatic disorders stand foremost. Even physicians have not been averse to the trial of treatment with bee poison, and there are records of patients subjected to increasing numbers of "bites" up to a total of fifty, or even a hundred, a day. In such cases the effects have been far more pronounced than mere local manifestations of bee sting.[3]

It is no longer satisfying to the inquisitive worker to designate a harmful substance, such as may be contained in the bite of an insect, by the vague name of toxin. Students now demand some knowledge of the chemical nature of the toxins. Are they protein in nature, so that the possibility of developing antitoxic substances may be reckoned with? Or are they well defined organic or inorganic compounds for which a chemical antidote can be secured? These are the sorts of questions that are likely to be asked nowadays in considering animal poisons. From the standpoint of the investigator, some of the difficulties become evident when it is recalled that the secretion of a honey-bee represents at best 0.0003 or 0.0004 gm. ($\frac{1}{1000}$ grain), two thirds of which is water. The residual substance is known to include a variety of compounds, including considerable protein.

That the poisonous component of the toxic secretion of the bee is not a protein was shown by Langer.[4] This discovery made it highly improbable that an immunity to bee poison can be developed through the usual mode of antibody production, as this type of biologic protective response is usually, if not always, associated with protein antigens. Immunity of some sort undoubtedly does exist, if one may trust the personal testimony of beekeepers. Bee poison is known to be markedly hemolytic; and its potency in producing severe inflammatory reactions, with edema and necrosis, has been demonstrated beyond doubt. These different phenomena are usually associated with potent agencies of quite unlike chemical character.

The latest information contributing to the explanation of the action of the bee poison is the outcome of studies by Flury,[5] who has actually worked with the product from several hundred thousand bees. Langer had believed that the protein-free bee poison was a nonvolatile organic base. Flury regards it as a compound of far greater complexity. A considerable part seems to be lipoid in character. By hydrolysis it has been possible to split off cholin, glycerol, phosphoric acid, palmitic and other fatty acids, an indol deriva-

1. Noguchi, Hideyo: Pub. 111, Carnegie Institution of Washington, 1909. Calmette: Les venins, les animaux et la sérothérapie antivenimeuse, Paris, Masson & Cie, 1907.
2. Faust, E. S.: Die tierischen Gifte, Brunswick, 1906.
3. Keiter, A.: Rheumatismus und Bienenstichbehandlung, Vienna and Leipzig, 1914.
4. Langer, J.: Ueber das Gift unserer Honigbiene, Arch. f. exper. Path. u. Pharmakol. 38: 381, 1896; Abschwächung und Zerstörung des Bienengiftes, Arch. internat. de Pharmacod. 6: 181, 1899.
5. Flury, F.: Ueber die chemische Natur des Bienengiftes, Arch. f. exper. Path. u. Pharmakol. 85: 319 (Jan.) 1920.

tive, presumably tryptophan, and an unidentified non-nitrogenous component. Some of these disintegration products are undoubtedly derived from phosphatids like lecithin. The last mentioned non-nitrogenous fragment is assumed to be the pharmacologically active component of bee poison. It can produce hemolysis, and behaves like the hæmolytic saponins. In view of these findings Flury regards the bee poison, in its natural form in the secretion, as a complex of lecithin with basic components, showing resemblances to the protein-free sapotoxins, on the one hand, and to poisons of the cantharidin type, on the other. Snake venoms also include saponin-like poisons which account for their hemolytic properties. The potency of cantharidin as an irritant poison helps to explain the hyperemia and attendant symptoms that bee stings call forth.

THROMBOPLASTIC PRODUCTS

It has long been known that most tissues furnish something that can play a potent part in the coagulation of the blood. In the usual process of clotting which occurs after a hemorrhage and thus represents one of the most effective protective mechanisms of the body, contact with tissues inevitably occurs. The blood itself, as it exists in the circulation, remains fluid under normal conditions because it lacks active thrombin, one of the essential factors in the clotting process. It has often been pointed out that if the plasma could be removed from the blood vessels without coming into contact with tissues and without destruction of any of the formed elements of the blood itself, it would tend to remain fluid as it exists within the vessels. Experimentally, plasma has been secure in this way; it clots promptly on addition of tissue extract.

The possibility of controlling hemorrhage more effectually in some cases by supplying a thromboplastic substance, as the tissue factor has been designated, long since suggested itself. Obviously, such a therapeutic procedure could not be expected to promote a successful outcome unless all the other essential factors —fibrinogen, calcium, etc.—were also present in adequate amount. Attention was directed some time ago to the use of extracts of tissues or certain cells, notably the blood platelets, in the attempt to produce effective hemostatic products. Some of them have already been the subject of patents.

The probability that the active component in tissue extracts is lipoid in nature was suggested by earlier investigators. In 1912, Howell[1] of Johns Hopkins University reached the conclusion that the thromboplastic substance is a phosphatid, which he subsequently identified with cephalin. Following this lead, commercial thromboplastic products have commonly been prepared from brain tissue, a material known to be rich in cephalin.[2] Whether they shall find a permanent place in therapy remains to be seen. Recently, however, Mills[3] of the University of Cincinnati has found lung extracts to be more active as thromboplastic agents than are the extracts of any other tissues tested, kidney coming second, and then heart, brain, spleen, thymus, testes and skin, somewhat in the order named. The remaining tissues were weakly active as compared to lung, some of them showing very slight thromboplastic action. In considering a possible biologic significance of this unlike coagulative action of different tissues, Mills asks whether the marked potency of the lung may not represent a special protection in pulmonary diseases, in which extensive destruction of the tissue occurs. In the case of the kidney, likewise, a peculiarly effective protection against hemorrhage in a vital organ may be postulated. Whether or not lung tissue will offer a better starting point for the preparation of therapeutically available hemostatic extracts remains to be seen. Obviously, if the active principle is identified with certainty, its most advantageous preparation will not necessarily depend on the potency of any particular tissue, but rather on the most available source of the definite chemical compound concerned.

1. Howell, W. H.: Am. J. Physiol. **31**: 1, 1912; The Coagulation of the Blood, Harvey Lectures, 1916-1917, p. 288.

2. New and Nonofficial Remedies, 1920, pp. 18 ff.

3. Mills, C. A.: The Activity of Lung Extract as Compared to Extracts of Other Tissues, in Inducing Coagulation of the Blood, J. Biol. Chem. **40**: 425 (Dec.) 1919.

NEW INTESTINAL PARASITES: A PLEA FOR MORE CAREFUL FECAL EXAMINATIONS

The extensive examinations made on soldiers during the war, and previously on many hundreds of civilians as part of the modern attempts to eradicate hookworm infection, have emphasized the paucity of our information regarding the intestinal zooparasites of man. Tapeworms and roundworms have long been recognized; some species are, in fact, not easy to overlook, owing to their conspicuous size and characters. The systematic use of the microscope has, however, revealed unexpected numbers and numerous novelties in the nature of such parasitic invaders.

About a year ago Kofoid and White,[4] working in the army laboratory car *Metchnikoff*, reported that a nematode (roundworm) ovum, apparently undescribed, had been found in 429 cases among approximately 140,000 soldiers examined. This is a characteristic illustration of what careful examination on a large scale may bring to light in clinical diagnosis. The ovum in question possessed a uniqueness in addition to its novelty, for it was said to be the largest ovum of intestinal worms encountered in human stools. Its dimensions averaged 95 by 40 microns, but the size was extraordinarily variable in different specimens. Kofoid and White were unable to identify the species, though they

4. Kofoid, C. A., and White, A. W.: A New Nematode Infection of Man, J. A. M. A. **72**: 567 (Feb. 22) 1919.

regarded it as related to *Oxyuris vermicularis*, the well known pinworm, seatworm or mawworm.

This record has now been surpassed by the finding of the eggs and specimens of an oxyurid hitherto unreported for man.[5] They came from a child living in the Philippine Islands. The ova are stated by Riley, who identified them at the University of Minnesota, to measure 125 by 40 microns. The worms, though resembling the genus to which the ordinary pinworm belongs, probably are of the species *Syphacia obvelata*.[6] Along with them appeared fragments of the rat tapeworm of man, a cestode likely to be found quite common in the United States. Thus, Frey [7] found this tapeworm not long ago in a third of the inmates of a Southern orphans' home, this incidence being exceeded only by that of hookworm infestation in the same group of 270 children.

These dwarf tapeworms are common to rodents, notably rats and mice. In man they are easily overlooked because of their small size, so that intensive routine examinations, such as hookworm tests require, alone afford a diagnosis. In the Philippine instance just recorded, a rodent tapeworm was found in a case in which the food of the child had evidently been contaminated by rats or mice. It is not improbable that these rodents also may have been responsible for the occurrence of the ova of the newly described species of roundworm. The circumstances related in the foregoing summary indicate the great importance of careful fecal examinations—an essential routine all too often entirely neglected.

"CHRISTIAN SCIENCE" AND SLOPPY THINKING

A New Jersey salesman, who claims to have been a member of the "Christian Science" faith for three years, was recently found guilty of manslaughter because he had permitted his 9-year-old daughter, who was suffering from diphtheria, to die without medical treatment. The little girl was given "treatment"—"absent" and otherwise—by a professional "Christian Science" practitioner. The man was fined $1,000 and costs. The judge, in imposing sentence, is reported to have said:

> In the light of present-day science, which is the result of many years of progressive experiment and demonstration, no one is justified in neglecting the use of such agencies as have been shown to be efficient in the treatment of malignant and contagious diseases, and this is especially true where one is charged with responsibility over the life of another, and particularly of a child of tender years, who has no option but to rely on the common sense and good judgment of its natural protector.

The verdict has brought to light, as such verdicts are likely to do, the loose thinking that characterizes so many of the so-called intellectuals of today. Well-meaning people, who deny that they are followers of Mrs. Eddy, have written to the newspapers denouncing the verdict and declaring that it is little less than a crime that a man should be punished for following the dictates of his conscience. The main point stressed by such people seems to be that as children occasionally die of diphtheria under medical treatment, there is no reason for getting excited when a child dies under "Christian Science" treatment. The argument, of course, is fallacious. The efficacy of the modern scientific medical treatment of diphtheria is not a matter of theory, belief or conscience—it is a matter of fact. Its efficacy is as demonstrable as is the efficacy of the Westinghouse air brake. The parent or guardian who fails to give his child or ward the benefit of modern medical treatment for diphtheria becomes as culpable as a railroad would be if it failed to equip its passenger trains with air brakes. Sometimes, it is true, the air brake fails to avert a fatality; but that is not the fault of the air brake, nor is it any argument for its abolition.

If an adult in his own right mind wishes to be treated by "Christian Science" or any other unscientific methods, there can be no objection, provided the disease from which he is suffering may not, through such treatment, become a menace to the community. Children of tender years, however, should not be sacrificed to the distorted views of those who are supposed to be their protectors.

Religious beliefs should be respected and, in general, they are respected. Where, however, religious beliefs conflict with the general welfare, such beliefs must give way. Presumably, the Mormons were sincere in their belief in polygamy; that particular tenet of their religion, however, had to give way to the more enlightened belief of the rest of the community. The Dukhobors that migrated to Canada were undoubtedly sincere in their belief that they should go nude, and the practice of this belief was undoubtedly less of a menace to the community than are some of the bizarre views held by "Christian Scientists" regarding the cause and treatment of disease. Nevertheless, the Dukhobors had to put on clothes. It is conceivable that we might have transplanted to this country some of the religious beliefs of India, but it is doubtful whether public opinion in the United States would ever look with equanimity on Sutteeism, even though the widows might declare that being burned on the funeral pyres of their deceased husbands was a matter of their own personal belief and was none of the concern of the general public. Only a few weeks ago a man in Chicago shot his son with the avowed intention of killing the boy because he feared the lad was acquiring bad habits and he wished to save the boy's soul. We have not yet noticed any letters of indignation protesting against the man's arrest. Possibly this

5. Riley, W. A.: A Mouse Oxyurid, Syphacia Obvelata, as a Parasite of Man, J. Parasitol. **6**: 89 (Dec.) 1919.
6. Seurat, L. G.: Sur les oxyures des mammifères, Compt. rend. Soc. de biol. **79**: 64, 1916.
7. Frey, J. H.: Helminthiasis at the Texas State Orphans' Home, Texas State J. Med. **11**: 229, 1915.

is because he represents a minority. Should such beliefs ever reach the dignity of a religious cult with money and well-organized publicity machinery behind it, there would doubtless be found many to defend the killing of minors for the purpose of "saving" them.

Current Comment

THE STREPTOCOCCI COMMONLY FOUND IN MILK

Streptococci are associated by the bacteriologically trained mind with inflammation and suppuration and all the dangers that they may entail. Hence, when it was reported that the streptococci that cause garget or mastitis in cattle are found abundantly in the milk of infected cows, it was easy to speculate on the possible ills of mankind that might follow the drinking of raw milk. How to make the indispensable food, milk, safe is an important problem. As we cannot escape the ever-present bacteria of our environment, it is essential that their nature should be recognized. It has been realized for some time that not all micro-organisms are baneful; some are even beneficent. Let it be said clearly, also, that not all streptococci are virulent. For a number of years it has been customary to lay stress on cleanliness of both man and beast in the handling of milk for human consumption. There is no longer any doubt that attention to this factor will greatly reduce the microbial content, the keeping qualities, and in general the wholesomeness of market milk. But it may come as somewhat of a surprise to many that the external, environmental factors related to the cow are by no means always the most menacing to the bacteriologic purity of milk. Man, the carrier of harmful species, is of course a constant source of danger; but the "dirt" that accumulates mechanically about the animal is far less threatening. According to the most recent observations of Jones [1] at the Rockefeller Institute Laboratories at Princeton, neither the fecal nor the skin streptococci of cows have been isolated from unpasteurized bottled milk of good grade with any great frequency, despite the fact that nonhemolytic types of these micro-organisms can be found in the vagina, saliva, skin and feces of the cattle. The principal source of the streptococci in milk, according to Jones, is the cow's udder. Most of the streptococci agree in character with mastitis streptococci, a fact that may now be regarded as definitely established. Although these have been observed in the milk marketed from a large herd during the last two years, diseases traceable to this milk supply have never been reported. Jones therefore believes that this evidence points to the low pathogenicity for man of the streptococci, particularly udder types, derived from the cattle and found in their milk. If this is established, such streptococci may be excluded as the source of severe epidemics of milk-borne sore throat. For this, human agencies must still be held responsible.

1. Jones, F. S.: Source and Significance of Streptococci in Market Milk, J. Exper. Med. 31: 347 (April) 1920.

THE DEADLY MOTOR CAR

In an analysis of the accidents occurring in St. Louis during March, 1920, the National Safety Council indicates that there were eleven fatalities and 187 persons injured in 494 automobile accidents. This, it must be noted, was in one month and in a city of less than a million population. The total number of accidents of all kinds was 791, so that the automobile accidents constituted almost two thirds of the total. The property damage was estimated at $39,500. The causes were not determined in 190 instances; skidding was responsible for ninety-one; careless driving for 205, and careless walking for twenty-seven. Quite a few of the accidents are ascribable to the carelessness of the motorist in giving the signal of his intent to turn, to pass, to stop, to back or to drive out from the curb. A few accidents were due to the glare of undimmed headlights. The great majority of all traffic accidents and fatalities are due to "carelessness." It is a safety aphorism that carelessness can be overcome only by education.

THE ACQUIRED TOLERANCE FOR MORPHIN

The explanations of those forms of idiosyncrasy which consist in failure of a person to react to the ordinary dose of a drug have been both varied and inconclusive. The instance technically designated as acquired tolerance represents a greatly decreased susceptibility to a drug as the dose is repeated. The person becomes readjusted to a new agency, whether it be alcohol, nicotin, arsenic or an opium alkaloid. Thus are drug habits formed. How does an originally sensitive and responsive organism acquire an immunity whereby it may withstand a previously toxic and sometimes ordinarily fatal dose? Apparently in some cases the tissues become adapted to the drug so that it no longer reacts as a foreign substance. Sometimes the intestinal absorption of the compound may decrease with increasing use by oral administration. This explanation has been offered for the acquired tolerance for arsenic, it being reported that frequently when large amounts are becoming tolerated by mouth, much smaller doses given subcutaneously may be toxic. Again, the defenses of the organism may become strengthened, so that a given compound is more readily destroyed by oxidation in the body. In some cases, antitoxic agencies of a chemical nature may actually come into prominence. Whether any of these possible mechanisms explanatory of tolerance are specific for individual drugs, or whether they represent more general biologic responses which might meet a variety of exigencies, is not so clear. It has been reported that the prolonged use of one drug may establish tolerance for others of the same class. Thus, it is said that chronic alcohol drunkards are more resistant than ordinary persons to the action of chloroform. If this is true, the explanation may lie in the fact that the chemically related chloroform and alcohol induce the same changes in the protoplasm. Precisely how tolerance to morphin is acquired is not yet clear. Faust [1] believed that whereas normal persons excrete

1. Faust, E. S.: Ueber die Ursache der Gewöhnung an Morphin, Arch. f. exper. Path. u. Pharmakol. 44: 217.

this alkaloid practically unchanged, showing that it circulates as such in the body, in those having a "habit" for morphin it is partially destroyed. This hypothesis of an increased destruction of the drug in tolerance has not been tenable in the light of subsequent researches.[2] Biberfeld[3] has demonstrated, however, that the tolerance to morphin is quite specific. In animals "immunized" to this narcotic, ordinary doses of a drug even so closely related as is diacetylmorphin (heroin) are unquestionably potent. Furthermore, according to Biberfeld's studies in the Pharmacologic Institute at Breslau, marked tolerance to morphin does not protect against the soporific barbital (veronal), nor against scopolamin or cocain. It has been asserted from time to time that the blood of persons exhibiting high tolerance contains protective, antagonistic or "immune" substances which are developed with the immunity to morphin. Carefully conducted investigations with the serum of tolerant animals have, however, thus far failed to afford any real substantiation of these assertions.

RESPIRATORY DISEASE TRANSMISSION BY INANIMATE OBJECTS

Cumming[4] has suggested, in discussing the transmission of influenza and influenzal pneumonia, that the hands are important factors in the conveyance of germs to healthy persons, and furthermore that hand-to-mouth infection will account for the major part of this transmission. In these studies the methods of washing army mess-kits were particularly concerned, as the wash water served as a means for the contamination of the hands in the groups showing high influenza rates. In a later article,[5] Cumming reports the results of a study of pneumonia in institutions, in some of which eating utensils were washed by hand and in others by machine washers. In the first group the pneumonia rate was much higher than in the second group. Still more recently the same investigator[6] has laid primary emphasis on tableware, particularly spoons, forks and knives, as a means of transmitting tuberculosis. This point of view is confirmed by deaths of guinea-pigs from tuberculosis in 25 per cent. of instances after injections of sediment from water in which spoons used by tuberculous patients had been rinsed after washing. In accepting these findings, however, it should be remembered that in intelligent households silverware is usually both washed and rinsed before being used again. It would be interesting to know the influence of the combination of these operations on freeing spoons from tubercle bacilli. The work of Cumming focuses the attention of sanitarians on other means of conveying germs of respiratory diseases than by droplet infection directly from mouth to mouth. More data are needed to show that these means are really the major ones. It is probably true that the inanimate objects and hands are capable of conveying disease germs as well as are the infectious droplets, and it is possible that too little attention has been given to them.

2. Cloetta, M.: Ueber das Verhalten des Morphins im Organismus und die Ursachen der Angewöhnung an dasselbe, Arch. f. exper. Path. u. Pharmakol. **50**: 453. Rubsamen W.: Arch. f. exper. Path. u. Pharmakol. **50**: 227.

3. Biberfeld, J.: Zur Kenntnis der Morphingewöhnung, II, Ueber die Spezifizität der Morphingewöhnung, Biochem. Ztschr. **77**: 283 (Nov.) 1916.

4. Lynch, C., and Cumming, J. G.: Am. J. Pub. Health **9**: 25 (Jan.) 1919. Cumming, J. G.: Ibid. **9**: 414 (June) 1919.

5. Cumming, J. G.: Am. J. Pub. Health **9**: 849 (Nov.) 1919.

6. Cumming, J. G.: Can the Tuberculosis Transmission Rate Be Reduced? J. A. M. A. **74**: 1072 (April 17) 1920.

IN THE COURSE OF THE DAY'S WORK

An interesting though not unique case is described in a recent bulletin sent out by the Federal Board for Vocational Education. Among the blinded ex-service men was a negro who seemed to be blind in both eyes. Neither eye could perceive five fingers at any distance. He had faint light perception and there was hope for sight restoration in one eye. The man was about to be assigned to a workshop for the blind when a physician managed to persuade him that he was not blind. The report of the case reads:

> He was suffering from psychoneurosis hysteria giving rise to marked blepharospasm and photophobia and amaurosis. All physical findings negative. Treatment by suggestion completely cleared up all symptoms and I discharged this man cured.

This case is not referred to because it is unique in medicine for, as physicians know, it is not. Had the man regained his sight, however, while under "Christian Science" treatment or while having his vertebrae pushed by a chiropractor, what a to-do would have been made of it. The case would have become a classic in the annals of the cult. As it is, the incident would never have reached the public eye had it not been for the bulletin of the vocational educational board.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST; SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

DELAWARE

Child Welfare Activities.—On request of the Delaware Reconstruction Commission, an officer of the United States Public Health Service has been assigned to duty in Wilmington in the office of the director of this commission as medical director of the child hygiene activities. He has under his supervision a number of children's clinics and health centers already established and will advise and assist in the establishment of others. In addition, he will exercise general supervision of medical inspection of schoolchildren about to be undertaken in the state in cooperation with a number of authorized and volunteer agencies.

DISTRICT OF COLUMBIA

Personal.—Dr. Van H. Manning, director of the Bureau of Mines, Department of the Interior, has tendered his resignation, effective June 1. Dr. Manning is leaving the government service to accept the position of director of research with the recently organized American Petroleum Institute. ——Dr. Ross McC. Chapman, for more than four years assistant superintendent of St. Elizabeth's Hospital, Anacostia, has been appointed medical superintendent of the Sheppard and Enoch Pratt Hospital, Towson, Md.

Survey of Delinquents.—On request of the judge of the juvenile court of the District of Columbia, officers have been assigned to the probation office for the purpose of making physical and mental examinations of juvenile delinquents and supplying the court with information relating to the physical and mental status of such delinquents, to be taken

into consideration in arriving at judicial decisions. Each child coming before the court will be subjected to an intensive physical and mental examination. These will be accompanied by careful medical-social follow-up work.

ILLINOIS

Personal.—Dr. Frank P. Norbury, Springfield, has been appointed neuropsychiatrist to the Wabash Railway System. ——Dr. Arthur F. Stotts, Galesburg, was shot by the husband of a patient, May 8, and is under treatment at the Cottage Hospital, Galesburg.

The Venereal Disease Menace.—A special discussion arranged by the Illinois Social Hygiene League was held at the Rockford Theater, Rockford, May 18. Moving pictures of venereal disease treatment were shown, and described by Dr. Alec N. Thomson, Brooklyn; Assistant Surgeon-General Claude C. Pierce, U. S. P. H. S., spoke on "Venereal Disease and the Local Practitioner," Dr. William L. Baum, Chicago, on "Local Phases of the Venereal Disease Menace," and Robert H. Gault, professor of criminology in Northwestern University, and president of the league, detailed the plans of the Illinois Social Hygiene League.

Organized Chiropractors Checked.—A report from the director of registration and education of Illinois states that twenty-five chiropractors have been enjoined by the circuit court of Rock Island County from treating human ailments without state licenses. These twenty-five chiropractors are members of Class "A" of the Universal Chiropractors' Association with headquarters at Davenport, Iowa. The Class "A" members of this association pay a membership fee and quarterly dues. In consideration of the payments, the association pays all fines assessed against them by the courts in Illinois for practicing without licenses. It also pays the fees of attorneys for defending them. When a chiropractor is fined in the courts, he is advised by the officers of the association to continue in his unlawful practice. The circuit court of Rock Island has temporarily enjoined these chiropractors from treating human ailments without licenses and has also enjoined them from carrying out the terms of their unlawful agreement with one another. They are enjoined from contributing to and paying, or paying any part of, the fines and costs and also the expenses and attorney fees that are assessed, or the expenses incurred by any person other than the one prosecuted in an individual case. B. J. Palmer, head of the Palmer School of Chiropractic at Davenport and secretary of the Universal Chiropractors' Association, is enjoined from paying the fines, costs, expenses and attorney fees of Class "A" members in Illinois. Thomas M. Morris and Fred Hartwell of LaCrosse, Wis., attorneys for the association, are enjoined from representing in the Illinois courts any of the members of the Universal Chiropractors' Association. The chiropractors who are enjoined are: Charles J. Brutus, Jesse Newman, Dora K. Yunker and F. W. Linsenmeyer, Champaign, Champaign County; R. E. Davenport, Chicago, Cook County; B. A. Clayton, Mrs. E. E. Clayton and A. H. Morrow, Kewanee, Henry County; Lena M. Warrick and T. L. Warrick, Ottawa, LaSalle County; Mary E. S. Fulleton Tiska and A. W. Tiska, Highland, Madison County; J. C. Underwood, Bloomington, McLean County; Philip H. Griggs, Jacksonville, Morgan County; W. J. Buchanan, Riley E. Bowman, E. T. Henry and S. F. Stewart, Peoria, Peoria County; Emma Calvin, Monticello, Piatt County; H. N. Mettler and Emma S. Rooks, Rock Island, and I. H. Beckholt, East Moline, Rock Island County; R. W. Peerman, Eldorado, Saline County; Elizabeth Goss, Delavan, Tazewell County, and J. L. Hubbard, Minonk, Woodford County. The writ in the injunction proceedings was signed by Attorney-General Brundage, State's Attorney Bell of Rock Island County, and Francis W. Shepardson, director of registration and education. The bill asks that other Class "A" members of the association who have conspired and confederated may be made parties defendant to the bill and bound by the order of the court as soon as their names are ascertained.

Chicago

Personal.—Dr. C. Hubart Lovewell and Elmer E. Simpson were overcome by fumes from a gas heater while attempting to revive patients who had been overcome by gas.—— Dr. Charles Louis Mix has accepted the position as head of the department of medicine of Loyola University School of Medicine.

Medical School Recognized.—A letter from the president of the Bureau of Medical Education and Licensure of Pennsylvania states that on April 21 the bureau voted to include Loyola University School of Medicine on its approved list, not only admitting its graduates to examinations but also receiving them through reciprocity.

INDIANA

Smallpox Epidemic.—An epidemic of smallpox is said to be prevalent in the Calumet region, Gary having forty-five cases and Hammond, fifty-two, several cases being reported also in Whiting, East Chicago and Indiana Harbor.

Vote for County Hospital.—At the recent election in Adams County, held in Decatur, to decide on the proposition to build a new hospital for Adams County to cost $100,000, 1,601 votes were cast in favor of the hospital and 1,347 against it.

Hospital Items.—The physicians of Shelbyville and Shelby County have recently formed the Shelby County Hospital Association. The association has purchased a site in Shelbyville where it proposes to erect a hospital.——Public subscriptions amounting to $105,000 have been received by the committee in charge of buying the Home Hospital at Muncie with a view to transferring it to a board of governors, who will operate it as a public hospital.——The City Hospital at Madison was recently combined with the King's Daughter's Hospital of that place.

IOWA

Personal.—Dr. Dallas L. Scarborough, Grand Junction, fell recently and fractured his hip. He is under treatment in a hospital in Iowa City.

County Society Reorganized.—Fremont County Medical Society which has lain dormant during the World War was reorganized, April 28, at Sydney. Dr. Brownlow B. Miller, Tabor, was elected president; Dr. Ralph S. Lovelady, Sydney, vice president, and Dr. Ambrose E. Wanamaker, Hamburg, secretary.

New State Officers.—At the annual meeting of the Iowa State Medical Society held in Des Moines, May 12 to 14, under the presidency of Dr. William L. Allen, Davenport, the following officers were elected: president, Dr. Donald Macrae, Jr., Council Bluffs; president-elect, Dr. Alanson M. Pond, Dubuque; vice president, Dr. Campbell P. Howard, Iowa City; secretary, Dr. Thomas B. Throckmorton, Des Moines (reelected); treasurer, Dr. Thomas F. Duhigg, Des Moines (reelected), and editor, Dr. David S. Fairchild, Clinton (reelected).

MARYLAND

Hospital to Open.—The Volunteers of America Hospital will be open for inspection, May 24. The hospital will not be ready to receive patients for about thirty days. The institution contains forty beds, and was built and equipped at a cost of $40,000.

Gift to Phipps Clinic.—A gift of $100,000 has been made to the Phipps Psychiatric Clinic, Johns Hopkins Hospital, by Henry Phipps of New York, founder of the clinic. This sum is to be a nucleus of a permanent endowment for the clinic. When the clinic was built, Mr. Phipps provided a maintenance fund for a period of ten years. Seven of the ten have already passed, so that this gift was received with great gratification by the hospital authorities. It will require the interest on $1,200,000 to maintain the hospital on its present basis, according to the hospital authorities, and interest on a fund of $2,000,000 will be needed to make full use of its laboratories and to provide for research work.

MASSACHUSETTS

Hospital Reopened.—St. John's Hospital, Lowell, with its new additions and alterations which have been in course of construction for the last two years at an expense of about $600,000 was formally reopened, May 12.

State Society to Meet.—The one hundred and thirty-ninth annual meeting of the Massachusetts Medical Society will be held, June 8 and 9, at the Boston Medical Library, under the presidency of Dr. Alfred Worcester, Waltham. The Shattuck Lecture will be delivered on the first evening by Asst. Surg.-Gen. Allan J. McLaughlin, U. S. P. H. S., Washington, D. C., on "Influenza"; the annual discourse on Wednesday noon, by Dr. Hugh Cabot, professor of surgery at the University of Michigan, Ann Arbor, on "Health Insurance, State Medicine or What?" The annual dinner will be served at the American House, Boston, on Wednesday afternoon.

Personal.—Dr. Stanley H. Osborn, Boston, epidemiologist of the Massachusetts Department of Public Health, has resigned to accept the directorship in the Bureau of Preventable Diseases in the Connecticut State Department of Health, Hartford.——Dr. McIver Woody, Boston, has been appointed dean of the Medical Department of the University of Tennessee, Memphis.——Dr. John H. Wyman, Quincy, has been reappointed associate medical examiner (coroner) for the Seventh Norfolk District.——Dr. James J. Goodwin, Clinton, has been appointed associate examiner (coroner) for the Fourth Worcester District.——Dr. George L. Tobey, Clinton, has been appointed medical examiner (coroner) for the Fourth Worcester District.——Dr. Randolph C. Hurd, Newburyport, has been appointed associate medical examiner (coroner) for the Third Essex District.——Dr. William T. Sedgwick, Boston, has sailed for England as the first exchange professor of public health. He will serve for a time as a member of the faculties of the universities of Cambridge and Leeds. Dr. Sedgwick has been elected a fellow of the Royal Institute of Public Health.

MICHIGAN

Hospital Commission Appointed.—A hospital commission has been appointed to have charge of the expenditure of $60,000, which has been raised by bond issue for an emergency hospital at Port Huron.

Personal.—Dr. Christopher G. Parnall, medical superintendent and director of the University Hospital, Ann Arbor, has been appointed a member of the Rockefeller Commission for the Study of Nursing Education.

Cooperation of Druggists in Venereal Disease Campaigns.—Much has been accomplished by the Michigan Department of Health in obtaining cooperation of druggists in conducting a venereal disease campaign. The venereal disease law, as passed by the Michigan legislature of 1919, required druggists to report venereal disease prescriptions when marked as such, to the Michigan Department of Health and also to discontinue dispensing medicine to venereal disease patients. During the first six months, 1,100 druggists reported prescriptions; 1,224 physicians wrote prescriptions; of the 1,721 estimated druggists in the state, 63.91 per cent. reported; 14,823 prescriptions were reported, and 10,055 cases of venereal disease were reported by physicians.

MISSOURI

Boylston Prize Awarded.—The Boylston Prize of $300 has been awarded to Stuart Mudd, Samuel B. Grant and Alfred Goldman, fourth year students at Washington University Medical School, St. Louis, for their essay on "The Effect of Chilling on the Membrane of the Throat and Tonsil."

New Hospital at Westplains.—Dr. Robert E. Hogan, Westplains, has completed and opened for service a hospital at Westplains under the name of Christa Hogan Hospital, in memory of his mother. The building is of brick, has twenty-one rooms and is at the service of all reputable practitioners.

Personal.—Dr. Moses B. Harutun, Joplin, has been elected commissioner of health and has appointed Dr. John A. Chenoweth as city physician.——Dr. Kate C. Spain, St. Louis, was severely injured, April 22, by being struck by an automobile while crossing a street.——Dr. Frank N. Wilson, St. Louis, has been appointed one of the American editors of *Heart*.——Dr. Frederick Hagler, St. Louis, has been appointed chief surgeon of the Stevens-Duryea Corporation, Chicopee Falls, Mass.

Public Health Service Conducts Child Welfare Experiment in Missouri.—At the request of the state health authorities, an extensive field investigation and demonstration in child hygiene activities is being made by the public health service. In additon to a staff of health officers from this service, seven women physicians and six women nurses, in addition to a full complement of women field investigators, have been appointed and are in the field. Efforts are being made to provide better supervision of expectant mothers and to provide facilities whereby mothers can secure medical advice and assistance in the care of their babies. In all these activities, the aim is to establish in the Missouri Board of Health a model bureau of child hygiene for dealing with the health of mothers and children. The work is being so planned and conducted that when the present survey and demonstration are completed a permanent organization will be left behind, supported entirely by the communities themselves.

NEW YORK

Dinner to Dr. Mandlebaum.—A dinner was tendered on May 8, at the Hotel Biltmore by the president and former members of the laboratory staff of Mount Sinai Hospital in honor of the twenty-fifth anniversary of Dr. Frederick S. Mandlebaum's appointment as pathologist to the institution. Among the guests were the president and the executive officers of the hospital.

Hearing on Chiropractor Bill.—A hearing on the bill providing for state licensing of chiropractors was held before Governor Smith, May 13. Among those who opposed the bill were Dr. Augustus Downing, deputy state commissioner of education, and Dr. Hermann M. Biggs, state health commissioner, representatives of the state health officers' association, the state charities aid association, the New York City Health Department and the New York Academy of Medicine.

Joint Clinics to Be Held.—The Committee on Joint Mental Clinics is planning to hold a large joint clinic during a six-day period for the purpose of furnishing expert diagnosis in the cases of patients brought to it. The clinic will cover an entire county after a survey has been made by public health nurses. The cases examined will include children's diseases, venereal diseases, tuberculosis, cancer, mental diseases and mental defectives, and although the work will be largely diagnostic, a follow-up system will be organized.

Public Tuberculosis Meeting.—The first public meeting of the New York Tuberculosis Association was held May 18, in the New York Academy of Medicine, when the subject of discussion was "How the New York Tuberculosis Associations Plan to Restore the Consumptive to Industry." Dr. James Alexander Miller presided, and a brief report was made of the accomplishments of the association during its first three months. The topic was discussed under four heads: the plan; occupation in treatment and convalescence; methods of occupational and vocational training, and after-care and the association's workshop.

Dentists Endorse Health Center Plan.—The New York Dental Society, at its annual meeting, unanimously adopted a resolution approving the provisions of the health center bill endorsed in the last legislature and placing special stress on the great need for proper care of the mouth and teeth of the rural population and for instructions in the disastrous physical results of neglecting to provide such measures. Ninety per cent. of children, 7 years of age, are suffering, it is estimated, from mouth defects requiring correction, and the Life Extension Institute, in 125,000 examinations, found that 14 per cent. of those examined had marked infections of the teeth and gums. The resolution provided for the appointment of a committee of the state dental society to cooperate with all other organizations concerned with or interested in public health, with a view to securing favorable action on the bill at the next session of the legislature.

New York City

Milk and Child Exposition.—The New York City Department of Health announces that it will hold a milk and child exposition in Grand Central Palace beginning on May 17, designed to educate the public as to the value of milk for children.

Campaign Against Cancer.—The American Society for the Control of Cancer held a special meeting at the New York Academy of Medicine, May 13, at which Dr. Harvey Gaylord of Buffalo spoke on the "Less Familiar Problems of Cancer," and Dr. Howard Lilienthal on "Cancer from the Standpoint of the Clinical Surgeon." This meeting was the opening event of the campaign against cancer that is to be carried on in this city during the last week in May, when a number of lay meetings will be held throughout the city. Dr. Frederick T. Van Buren is director of the campaign. Twenty-five physicians have agreed to deliver addresses at meetings during the week.

United Hospital Fund Distributed.—The United Hospital Fund has completed the distribution of $850,000 among the forty-four nonmunicipal hospitals of the city. Of the amount, $400,000 was distributed among nineteen general hospitals in February, after the campaign to secure $1,000,000 had been closed. The remaining $425,000 has been distributed among ten special hospitals, nine women's and children's hospitals and six homes for chronics and convalescents. The daily per capita cost of patients in the forty-six united hospitals in

1914 was $2.02; four years later it was $3.20. In 1911, 39 per cent. of the patients were listed as free patients, while in 1918 only 23 per cent. were free patients.

Personal.—Dr. Louise Pearce of the Rockefeller Institute for Medical Research sailed for England and Belgium en route to the Belgian Congo to study the chemotherapy of African sleeping sickness.——Dr. Royall H. Willis, Sea Gate, retired, formerly assistant director of the bureau of child hygiene of the department of health, was recently presented with a signet ring by the members of the bureau as a token of their appreciation of his courtesy and consideration during his service of over twenty years.——Dr. Otto V. Huffman, Brooklyn, dean of the Long Island College Hospital, has resigned and has been appointed a member of the faculty of internal medicine in the New York Post-Graduate School and Hospital.——Dr. Charles Gordon Heyd has been appointed professor of surgery at the New York Post-Graduate School and Hospital.

OREGON

Cooperates in Mental Hygiene Survey.—The University Extension Department of the University of Oregon, with the approval of the state health officer, invited the United States Public Health Service to cooperate with the university in making a survey of the extent of the delinquency, dependency and feeblemindedness problems of the state from the standpoint of mental hygiene. These investigations were authorized at the last meeting of the state legislature. This survey is made by the communities themselves, under expert direction, and when necessary with the active participation of the expert. Under the constitution, all new legislation involving appropriations must be submitted to the people for a referendum vote; hence the survey now being made may be counted on to constitute an important measure for educating the people in all lines of social hygiene, including mental, physical and child hygiene.

PENNSYLVANIA

Personal.—Dr. John French Kerr, Connellsville, has volunteered his services as a medical missionary in Africa under the Board of Foreign Missions of the United Presbyterian Church.

Compulsory Health Insurance.—At the meeting of the Pittsburgh Public Health Nursing Association, to be held May 27, John B. Andrews, Ph.D., secretary of the American Association of Labor Legislation, will speak on "Compulsory Health Insurance."

Philadelphia

Medical Club to Give Reception.—The Medical Club of Philadelphia has issued invitations to a reception to be given in honor of Dwight W. Morrow, May 28, at the Bellevue-Stratford.

Californian Speaks Before College.—At the stated meeting of the College of Physicians of Philadelphia, May 5, Dr. George H. Whipple, professor of research medicine in the University of California, read a paper entitled "Studies on Blood Regeneration in Anemia."

The Gross Prize.—The Samuel D. Gross prize of the Philadelphia Academy of Surgery for 1920, amounting to $1,500, has been awarded to Dr. Evarts A. Graham of Washington University Medical School, St. Louis, for his essay entitled "Some Fundamental Considerations in the Treatment of Empyema Thoracis."

WISCONSIN

Personal.—Dr. Frank M. McGauley has resigned as city physician and health officer of Fond du Lac, and has been succeeded by Dr. Ned J. Malloy, Fond du Lac.

Hospital Burns.—The Egeland Hospital, Sturgeon Bay, was entirely destroyed by fire recently. Dr. Egeland has secured an option on the Joseph Richmond Building, Sturgeon Bay, and will remodel it for use as a hospital

CANADA

New Salvation Army Hospital.—A new maternity hospital is to be built in Ottawa, Ont., by the Salvation Army at a cost of $125,000. It will be completed and ready for occupation by the end of November.

Academy Election.—Dr. Jabez H. Elliott has been elected president of the Academy of Medicine, Toronto; Dr. Robert T. Noble, vice president; Dr. J. Herbert McConnell, treasurer (reelected), and Dr. Frederick C. Harrison, secretary (reelected).

Personal.—Dr. Frank Gray has arrived in Montreal from England.——Dr. Margaret Parks, St. John, has been appointed medical inspector of New Brunswick under the Dominion Government. She will have charge of inspecting immigrants at the port of St. John.

Hospital Burns.—Fire caused by an overheated furnace destroyed the Essex County Tuberculosis Sanatorium, Union-on-the-Lake, forty miles south of Windsor, April 29. The forty-five patients escaped without injury and were sheltered in neighboring homes pending their removal to the Hotel Dieu, Windsor. The loss is estimated at $100,000.

University News.—Lieut.-Gen. Sir Arthur Currie, inspector-general of the Canadian militia, and commander of the Canadian forces in France, has been given the degree of Doctor of Laws by McGill University, Montreal, and appointed president of that institution in succession to Sir Auckland C. Geddes, Montreal. Before participating in the great war, General Currie was in business in Vancouver. He held no university degree, but had taught school for six years. Not being a university man, the appointment of the general will be watched with interest by educators.

Medical Associations to Meet.—The annual meeting of the Canadian Medical Association will be held in Vancouver, June 22 to 25. The address in medicine will be delivered by Dr. Charles Lyman Greene, St. Paul, and the address in surgery by Dr. Edward Archibald, Montreal, on "Surgical Treatment of Ulcerated Intestinal Tuberculosis as Occurring Chiefly in Pulmonary Tuberculosis."——The annual meeting of the Canadian Public Health Association will be at Vancouver, June 21 to 23, under the presidency of Dr. Henry E. Young, Victoria, B. C.——The fortieth annual meeting of the Ontario Medical Association will be held in Toronto, May 25 to 28.

Health Board Given Additional Power.—The Provincial Board of Health of Ontario by an act of the legislature will be created a "body corporate." This results as an aftermath of the recent smallpox epidemic and the compulsory vaccination complexity. As the courts recently declined to uphold the compulsory vaccination order of the Ontario Board of Health, the officials of the board sought proper legislative authority to enforce the vaccination act should conditions again arise demanding its enforcement. It has been held by these selfsame officials that the Board of Health of Toronto, being a corporate body, had this authority, but failed to exercise it, and left the onus of doing so on the Ontario Board of Health.

Tuberculosis in Canada.—Dr. Charles D. Parfitt, Gravenhurst, before the special committee on pensions in Ottawa, has stated that during the great war 35,684 Canadian soldiers were killed in action in five years, while the number of deaths from tuberculosis in Canada during five years was 42,920. There were 8,508 cases of tuberculosis in the Canadian Expeditionary Forces during five and three-quarters years up to April 30, 1920. In the case of men discharged with the disease apparently arrested, the most critical time was the second year after the discharge when a man becomes less careful. Mortality was heaviest four years after discharge, and approached normal in seven years. He maintained that the maximum pension should be granted temporarily and should be subject to frequent revision as needed.

GENERAL

New Hospital Magazine.—The first copy of *Hospital Progress* has just appeared, this being the official magazine of the Catholic Hospital Association of the United States and Canada.

Public Health Meeting Postponed.—The date of the annual meeting of the American Public Health Association at San Francisco has been changed from August 30 to September 13 to 17. The change was necessitated by the state election which is set for August 30.

Gorgas and Noble Sail for Africa.—Last week Gen. W. C. Gorgas left for England, where he is to receive an honorary degree. He was accompanied by Brig-Gen. Robert E. Noble, who is on a six months' leave of absence. They will proceed to West Africa to study what is alleged to be an outbreak of yellow fever in that district.

Red Cross Scholarships.—Ten scholarships in public health nursing of $1,000 each are being offered by the League of Red Cross Societies to the Red Cross membership of stricken

countries or to nations with inefficient Red Cross organizations. The course of study will be carried out at the Kings College, Woman's Department, University of London, and will begin in October. The traveling expenses to London and return will be provided for holders of the scholarships.

Medical Women Elect Officers.—At the annual meeting of the Medical Women's National Association held in New Orleans, April 26 and 27, the following officers were elected: president, Dr. Mary Elizabeth Bass, New Orleans; vice presidents, Drs. Grace W. Kimball, Poughkeepsie, N. Y., M. Louise Hurrell, Rochester, N. Y., and Helena T. Ratterman, Cincinnati; recording secretary-treasurer, Dr. L. Rose H. Gantt, Spartanburg, S. C., and corresponding secretary, Dr. Isabelle T. Smart, New York.

Baptists to Build Hospitals.—Authority to build a $1,500,000 hospital in New Orleans was unanimously approved by the Southern Baptist Convention held at Washington, D. C. In presenting the report of the committee on hospitals to the convention, Dr. F. S. Groner of Texas declared that Baptists of the South are endeavoring to provide for adequate hospital facilities in various southern states. It is planned to erect Baptist hospitals in other cities. This plan includes one at Louisville, Ky., Lynchburg, Va., and one each in Alabama and North Carolina.

Civil Service Examinations.—The United States Civil Service Commission announces an open competitive examination for positions in the Indian Service; acting assistant surgeon, Public Health Service; surgeon in the coast and geodetic survey, and positions requiring similar qualifications, at salaries varying from $1,000 to $3,000 a year, for which applications will be received at any time. Examinations will be held, July 7 and September 8, for physician, Panama Canal Service, with an entrance salary of $225 a month, with promotion to $340 or more; and June 22, for bacteriologist, St. Elizabeth's Hospital, Washington, D. C., with a salary of $2,500 a year.

Health Program of National Education Association.—At the annual meeting of the National Education Association to be held in Salt Lake City, July 5 to 9, inclusive, the evening session of July 7 is to be devoted to health education. The subject will be discussed by Prof. Thomas D. Wood of Columbia College, New York City; Sallie Lucas Jean, director of child health organization, New York City; E. G. Gowans, state health inspector, Salt Lake City; A. A. Slode, director of health association, Cheyenne, Wyo.; Margaret S. McNaught, commission of elementary education, Sacramento, Calif., and Catherine D. Blake, principal of Public School No. 6, Manhattan, N. Y.

Report on Coal-Tar Products by Alien Property Custodian.—Prior to the World War practically no medicines were manufactured in America from coal-tar products. This is shown in the report of the Alien Property Custodian which contains a chapter on how Germany dominated the American chemical and dyestuff industry. The report says in part:

"In medicinals very little real American manufacture existed. A few of the coal-tar pharmaceutical products were produced by two American houses in St. Louis, the Mallinckrodt Chemical Works and the Monsanto Chemical Works. The enormous dispensing and distributing business of such firms as Parke, Davis & Co., Lilly & Co., and Powers-Weightman-Rosengarten Co. successful and efficient as it was beyond comparison with similar business in any other country, seems to have involved very little real manufacture, and the materials used were largely imported. There seems to have been but little, if any German interests in this branch of the industry, except among small brokers and dealers."

Public Health Service Experiments on Milk Powders.—Since August last, the United States Public Health Service, cooperating with the Boston Baby Hygiene Association, Department of Pediatrics of the Massachusetts General Hospital and Dr. Milton J. Rosenau of the Department of Preventive Medicine in Harvard University, has been engaged in experiments to demonstrate the usability of dry milk powders. The experiments are to continue until the end of the present fiscal year, July 1, at which time a report on the work is to be published. In a preliminary statement it is said that the investigators have established the usability of such milk and that it is "unquestionably beneficial." It is to be utilized particularly for supplying all babies with milk in tropical and semitropical countries.

Nurses Elect Officers.—At the annual meeting of the American Nurses Association held last month in Atlanta, Ga., the following officers were reelected: president, Clara D. Noyes, Washington, D. C.; vice presidents, Susan D. Frances, Philadelphia, and Sarah D. Sly, Birmingham, Mich.; secretary, Katherine DeWitt, Rochester, N. Y., and treasurer, Mrs. C. V. Twiss, New York City.——At the meeting of the National Organization for Public Health Nursing the following officers were elected: Edna Foley, Chicago, president; Elizabeth G. Fox, Washington, D. C., and Jessie Marriner, Montgomery, Ala., vice presidents, and Olive Chapman, Denver, secretary.——The National League for Nursing Education has elected the following officers: president, Anna C. Jamme, San Francisco; vice presidents, Louise M. Powell, Minneapolis, and Ida M. Stewart, New York City; secretary, Alice M. Flash, and treasurer, Bena M. Henderson.

Association of Medical Museums.—The thirteenth annual meeting of the American and Canadian Section of the International Association of Medical Museums was held at Cornell University Medical College, New York City, April 1, under the presidency of Dr. Oskar Klotz, Pittsburgh. The following officers were elected: president, W. M. Late Coplin, Philadelphia; vice presidents, Drs. James Ewing, New York City; Howard T. Karsner, Cleveland, and Harold E. Robertson, Minneapolis; councilors, Drs. Aldred S. Warthin, Ann Arbor, Mich.; Oskar Klotz, Pittsburgh; Robert A. Lambert, New York City; C. S. Silvester, Washington, D. C.; William G. MacCallum, Baltimore, and Lawrence J. Rhea, Montreal; secretary-treasurer, Maude E. S. Abbott, Montreal, reelected, and assistant secretaries, Louis Gross, Montreal, and Harry Goldblatt, Cleveland. The annual exhibition of the society of materials illustrating papers on the program of the association and the Association of Pathologists and Bacteriologists was held at Cornell University April 1 and 2.

Bequests and Donations.—The following bequests and donations have recently been announced:

St. Vincent's Home and Maternity Hospital, Philadelphia, $5,000 by the will of James B. Rodgers.

College of the City of New York, $7,500 for a medical preparatory fellowship; Woman's Hospital, New York City, Hospital in India of the Dutch Reformed Church of New York, each $5,000; St. Luke's Hospital, New York, for a free bed for consumptives, $5,000, and Society of Widows and Orphans of Army Men, $1,000 by the will of Miss Anna M. Sandham.

Biologic Institute, Lyons, France, a donation of 100,000 francs, the interest to be used to permit one student of the University of Lyons to devote his time to laboratory work on communicable diseases, by Mr. Douglas Flattery.

St. Luke's Hospital, Davenport, Ia., $50,000 by the will of Judge Nathaniel French.

Lynchburg, Va., Home and Retreat, a gift of $60,000 by the family of James P. Gilliam as a memorial to Mr. Gilliam.

Industrial Home Association for Destitute Children, Trenton, N. J., $2,000, and Mercer Hospital, Trenton, $1,000, after the death of his wife, by the will of Wesley Creveling.

Toronto Free Hospital for Consumptives, Muskoka Free Hospital for Consumptives and Queen Mary's Hospital for Consumptives, Weston, Ont., each $1,000 by the will of Mrs. Featherstonhaugh, Toronto.

French Hospital, Montreal, $6,000 the result of Tag Day, May 5.

The United States Pharmacopeial Convention.—The Tenth Decennial Pharmacopeial Convention was held in Washington, D. C., May 11 and 12, under the presidency of Dr. Harvey W. Wiley. Dr. Wiley, in his presidential address emphasized the importance of maintaining a judicial frame of mind in compiling the new edition of the Pharmacopeia, and insisted that a conscientious observation must be given to the principle in law which forbids a judge in a court of equity to permit personal advantage to influence the actions of the court. He called attention to the importance of the Pharmacopeia as a book of standards and its value to the public. Dr. Reed Hunt, Boston, was elected president for the next decennium, and Dr. Lyman F. Kebler, Washington, D. C., secretary. The board of trustees elected were Drs. J. H. Beal, Urbana, Ill.; H. M. Whelpley, St. Louis; George H. Simmons, Chicago; S. Solis Cohen, Philadelphia, and Mr. F. J. Wulling, Minneapolis. By mutual consent the new committee on revision is constituted of seventeen physicians and thirty-three pharmacists and chemists. This committee organized by electing E. F. Cook, Philadelphia, chairman, and Charles H. LaWall, Philadelphia, secretary. Dr. H. C. Wood, Jr., Philadelphia, was appointed chairman of the Subcommittee on Scope. This is the committee in which physicians generally have the greatest interest as it has much to do with the selection of the drugs which are described in the Pharmacopeia. It was tentatively decided by the General Committee on Revision that the expression "mil" adopted in the last revision shall be abandoned in the new revision returning to the old expression "cubic centimeter."

International Congress of Surgery.—The Fifth International Congress of Surgery will be formally opened at the Faculté de Médecine, Paris, July 19, at 2 p. m., to be followed

immediately by a discussion on blood transfusion, introduced by Dr. Jeanbrau, Brussels. Tuesday, there will be papers on cardiovascular surgery, by Drs. Tuffier of Paris, Sencert of Strassburg, Alessandrini of Rome and Charles Goodman of New York, and a discussion on surgical hematology, by Drs. A. Depage and Goovaerts of Brussels and Evarts A. Graham, St. Louis. Fractures of the femur will be the topic of discussion at Wednesday's session, to be opened by Drs. Patel of Lyons, Meurice Sinclair of the British Army Medical Corps, and Kellogg Speed, Chicago. The entire session on Thursday will be given over to papers on the treatment of tumors by radium and roentgen rays, by Drs. Régaud of Paris, Neville S. Finzi of London, Giuseppe Mioni of Rome and Robert B. Greenough, Boston. Papers on the prevention and treatment of tetanus by Drs. Donati of Modena, Cummins of London, Sieur of Paris, and Astley P. C. Ashhurst, Philadelphia, will conclude the scientific program on Friday. Clinics will be held in the Paris hospitals on Monday, Wednesday and Friday at 9 a. m., and business meetings are scheduled for Tuesday and Thursday at 10 a. m. In connection with the congress, there will be an international exposition of fracture apparatus, which will not be limited to members of the congress. Applications for space should be made not later than July 15 to Dr. M. Auvray, 50 rue de Pierre Charron, or at the Faculté de Médecine, rue de l'Ecole de Médecine, Paris, and should contain information as to the name, title and address of the exhibitor, the title of the exhibits, the amount of space required, expressed in square meters, and whether the objects are to be exhibited in glass cases or on tables, shelves or walls. Social entertainments will include a reception to the president of the congress, Dr. William W. Keen, Philadelphia, on Tuesday evening, and a banquet on Wednesday evening, both at the Palais du Quai d'Orsay. The American committee of the congress includes Drs. Charles L. Gibson, New York City, Richard H. Harte, Philadelphia, and Lewis L. McArthur, Chicago. Physicians who desire to attend the congress are advised to make steamer reservations at the earliest possible date, as there is every indication that the demand for accommodations will exceed the capacity of available steamers.

FOREIGN

Personal.—Dr. Ernest H. Starling, professor of physiology in the University of London, has gone to India to advise the British government with regard to the formation of a central medical research institute for India and will include in his travels Bombay, the Punjab, Bangalore, Calcutta, Delhi and Pasauli.

New German University.—It has been planned for some time to found a university at Cologne. The necessary formalities were complied with last year, and the new university has recently come into being very quietly. The various colleges and institutes have thus been collected into a state university which offers a chance to relieve the overcrowding of the university at Bonn. The new university starts with 2,000 students and over forty instructors, according to the *Paris médical*. It is rather a resurrection than a new creation, as Cologne was a seat of higher learning centuries ago, and the Akademie für praktische Medizin has been in existence as a municipal institution since 1904.

Physicians' Children in Austria.—Certain members of the profession in Austria have organized a central aid committee which is now collecting data in regard to the children in the families of physicians who would like to send them out of the country for a time. A question-blank has been sent to all physicians in the country, asking them to specify their wishes in the matter and list the eligible children. They must be over 7 and free from psychic and physical disease and enuresis. The committee hopes to get in touch with medical organizations in other countries and be able to place the children in homes elsewhere for a few weeks or months. The address of the committee is the Zentralhilfskomitee der Aerzte Oesterreichs, Vienna I, Börsegasse 1, Austria.

Tribute to Pure Food Champion in the Netherlands.—Dr. P. F. van Hamel Roos, an Amsterdam expert in chemistry, founded in 1884 a monthly devoted to investigation of adulterations in foods, drugs, etc., the *Maandblad tegen Vervalschingen*, and has published it regularly since. It has made him many enemies but also many friends, and a number of his friends arranged to make the April number of his monthly a souvenir issue in honor of his seventieth birthday. It contains a number of articles by leading chemists and physicians, and an interesting account of how the whole issue was planned and published without his knowledge, while he was making up and correcting the proofs of the regular April number, which will appear later as the May issue. Of this *jubileum-nummer* one of the writers says, "This adulteration of the April number of the *Maandblad* is one of the few adulterations which have got past van Hamel Roos undiscovered."

The Profession in the German Empire.—The *Deutsche medizinische Wochenschrift* states that at the last census there were 31,602 physicians in the German empire. The number is now estimated at 40,000 although the extent of the empire has been much reduced, as many physicians have lost their positions in the colonies and other countries and have returned to the fatherland, while the medical officers dismissed from the military service swell the list of medical men and there is almost unprecedented flocking to the medical schools. The employment bureau of the Aerzteverband had 3,163 vacant positions to fill in 1914, but in 1919 there were only 1,614 vacancies. At present there are 4,000 applications on file, some of them waiting for more than a year, without any positions being open to candidates. Our exchange adds "The prospects for the future of the medical profession are consequently the worst that could be imagined."

Australasian Medical Congress.—The eleventh session of the Australasian Medical Congress will be held, after an interval of more than six and one-half years, in Brisbane, Queensland, August 23 to 28, 1920, under the presidency of the Hon. William F. Taylor. The work of the congress has been divided into eleven sections, as follows: medicine, presided over by Dr. Richard R. Stawell, Melbourne; surgery, presided over by Dr. H. S. Newland, Adelaide; obstetrics and gynecology, presided over by Dr. Fourness Barrington, Sydney; pathology and bacteriology, presided over by Dr. William J. Penfold, Melbourne; public health, presided over by Dr. John H. L. Cumpston, Melbourne; ophthalmology, presided over by Dr. A. Leo Kenny, Melbourne; otology, and laryngology, presided over by Dr. Herbert W. J. Marks, Sydney; diseases of children, presided over by Dr. W. F. Litchfield, Sydney; naval and military medicine and surgery, presided over by Col. George W. Barber, Perth; neurology and psychologic medicine, presided over by Dr. Henry C. Maudsley, Melbourne, and dermatology and radiology, presided over by Dr. T. G. Moldsworth, Sydney.

Deaths in Other Countries

Dr. **Blanco Ledesma** of Ciudad Bolivar, Venezuela, a writer on tropical pathology, committed suicide, Oct. 19, 1919.——Dr. **Walter Georgi,** assistant at the Serum Institute at Frankfort on the Main, whose name has been prominent of late in connection with the Sachs-Georgi precipitation test for syphilis. He succumbed to severe influenza, aged 31.——Dr. **F. Knauff,** formerly professor of hygiene and legal medicine at the University of Heidelberg, aged 85.——Dr. **Mariano Alcedán,** a surgeon of Iquique, Chile, until recently when all persons of Peruvian birth were expelled from the city by the Chilean government.——Dr. **H. Hessler,** privatdozent for otology at the University of Halle, aged 69.——Dr. **Moriz Benedikt,** professor of electrotherapy and neuropathology at the University of Vienna, author of numerous works on these specialties, on "second life," brains of criminals, etc., aged 85.——Dr. **C. T. Carvallo,** called the founder of gynecology in Peru, the first incumbent of the chair for gynecology in the University of Lima, founder of the Academia Nacional de Medicina, and one of the founders of the Sociedad Peruana de Cirugia, now being organized.——**Albert J. Chalmers,** M.D., F.R.C.S., D.P.H., organizer and some time professor of physiology and pathology of the Ceylon Medical College, later director of the Wellcome Research Institute at Khartoum, joint author with Dr. Aldo Castellani of a Manual of Tropical Medicine and accredited with much original work in pathology, notably on mycetoma, died, April 6, at Calcutta, aged 50, from infective jaundice.

LATIN AMERICA

Personal.—Drs. Jorge Vargas S. and Rafael Domínguez of Bogotá, Colombia, have been visiting clinics at Rochester, Minn., and Chicago.——Dr. Rodolfo Arce of Panamá is now in New York on his way from France, where he served during the war.——The organized ophthalmologists of Mexico have recently admitted ear and throat men to their society, so the name has been changed to the Sociedad Mexicana de Oftalmologia y Oto-rino-laringologia. Dr. Rafael Silva has been elected president and Dr. Vélez continues as secretary of the organization.

Government Services

Bill for Tuberculosis Hospital

Provision for the erection of a hospital for tuberculous patients in Colorado is made in a bill introduced by Congressman Timberlake of that state. The land must be donated without charge to the government and provision is made for construction thereon of a complete hospital plant at a cost of $1,500,000. The hospital will be used for the treatment of tuberculous patients who are beneficiaries of the War Risk Insurance Bureau and the Public Health Service.

Health Conditions of the Army

Health conditions among troops in the United States are excellent. The admission and noneffective rates show a slight decline from the unusually low rates of last week. Epidemic diseases are still reported from the camps receiving large numbers of recruits. Camp Grant heads the list with 13 new cases of measles; Fort Oglethorpe, 10; Camp Humphreys, 8, and Camp Pike, 4. There have been reported throughout the various camps a few cases of pneumonia, malaria and one case of scarlet fever. The death rate is considerably lower than last week. There were 10 deaths, 6 of which were caused by communicable diseases, 5 dying of tuberculosis and 1 of pneumonia.

Government Regulates Use of Hot Springs

The government is making complete regulations with reference to the use of hot waters prescribed by physicians at the Hot Springs, Ark., reservation. This is accomplished by a provision in the Sundry Civil Bill which has just passed the House of Representatives and gives the Secretary of the Interior authority to assess and collect reasonable charges from physicians for the exercise of the privilege of prescribing the mineral water at the reservation. The money received from the exercise of this authority will be used in the protection and improvement of the reservation. The purpose of this regulation is to permit only registered physicians to prescribe the waters; to prevent improper charges, and to maintain high medical standards.

Public Health Service Takes Over Army Hospital

The Public Health Service will take over from the War Department the tuberculosis sanatorium at Fort Bayard, N. M.; it will be used for the treatment of discharged and disabled soldiers suffering from tuberculosis. The sanatorium is well fitted for the treatment of such patients by reason of its location and climate and the fact that outdoor life may be followed during a large portion of the year. The sanatorium will provide 1,000 beds. It is the intention of the Public Health Service to take only ambulatory cases of tuberculosis at Fort Bayard. Patients will be admitted only after careful observation to make sure that their condition is suitable for successful treatment at the high altitude of Fort Bayard. In general it is the policy of the Public Health Service not to move patients from their home localities, for experience has shown that such removal often has an unfavorable effect. Patients for this sanatorium will be drawn principally from the Middle West and South.

Appropriation Asked for Public Health Service

Forty million dollars is the amount which will be required by the Public Health Service in the year 1921 for medical, surgical and hospital service and supplies for war risk patients.

Dr. H. S. Cumming, Surgeon-General, has made formal request in a letter to the speaker of the House of Representatives that this amount be made available. In part Dr. Cumming says:

"The present rate of expenditures of the Public Health Service for hospital care and treatment of its beneficiaries is about $2,387,000 per month or $28,644,000 for the year.

"There are at present in government and civilian hospitals about 14,500 patients, and the service is furnishing about 69,500 office treatments and making 45,000 physical examinations per month. It is believed that the number will increase to 20,000 in-patients and that there will also be a corresponding increase in the number of office treatments and physical examinations during the coming year. It is therefore thought that the appropriation for next year should be at least 40 per cent. more than expenditures at the present time."

Psychology of Aviation

Dr. Harry M. Johnson, S. C., U. S. Army, in charge of the Department of Psychology of the Air Service Medical Research Laboratory, reports that during the year research was prosecuted along two distinct lines: an effort to gain a somewhat more intimate acquaintance with the effects of low oxygen on the integrity of response, and an effort to develop more sensitive tests for the detection of general aptitude for aviation work, and of its deterioration in the earlier stages of staleness. Extensive and detailed statistical study of the records of more than 6,000 classification tests for resistance to deprivation of oxygen was made. An attempt was made also to demonstrate the progress of impairment of behavior by the use of an objective record of the speed and accuracy which the subject can maintain in carrying on work of uniform difficulty as the supply of oxygen is being diminished. Researches were also made on the influence of diminished air pressure, simulating an altitude of 20,000 feet, on the time required for selective reaction to a number of combinations of signals visually perceived. A study of associative responses was also begun. It is believed that two forms of test, if sufficiently refined, might prove to be quite valuable in the diagnosis of aviational ability and in exhibiting its impairment. These tests are (*a*) of the ability to control the coordinated activity of certain systems of voluntary muscles and (*b*) of the relative time required for selective reaction to one of three signals presented successively and in irregular sequence under a standard condition of observation and under a condition of observation so difficult as to be trying. The energies of the department were also devoted to the supervision of the psychologic features of the routine tests at laboratories, to the administration of classification tests at the local fields and to cooperation with other departments in the administration of tests in which the department of psychology was not directly interested.

MEDICAL OFFICERS, UNITED STATES NAVY, RELIEVED FROM ACTIVE DUTY

ILLINOIS

Chicago—Fischer, C.
Huber, P. R.
St. David—Mercey, R. J.

NEBRASKA

Omaha—Davis, D. L.

NORTH CAROLINA

Troutmans—Ervin, C. E.

PENNSYLVANIA

Beaver—Purdy, J. E.

Foreign Letters

PARIS

(*From Our Regular Correspondent*)

April 22, 1920.

Living Micro-Organisms in Paper

Dr. Galippe recently presented before the Academy of Sciences a very interesting communication on living micro-organisms in paper and their resistance to heat and the action of time. However little one may know about the processes of manufacture, it is not surprising that paper contains many micro-organisms. But it was generally supposed that these were destroyed in the course of the many operations which are undergone in the stages from pulp to paper. Now, according to the researches of Galippe, this is not the case, and all papers in use harbor living and cultivable micro-organisms. What is more, these organisms offer considerable resistance to heat, since filter paper may be subjected for half an hour to a temperature of 120 C. in an autoclave without the least effect on them. Chemists, therefore, will have to take certain precautions in definite cases. Galippe wondered if these infinitely minute objects which are so resistant to heat were any more sensitive to the action of time. With this in mind, he directed his attention to papers manufactured in the eighteenth and fifteenth centuries, and after repeated examinations, he was able to demonstate the important fact that even in the fibers of these papers are found micro-organisms susceptible to cultivation and endowed with lively motion. In the paper of one incunabulum, Galippe found a bacillus at least morpholog-

ically identical with the tetanus bacillus. Encouraged by these results, he directed his researches to paper from Chinese manuscripts dating back to a very early epoch, certainly some centuries before the invention of printing. There again he found these microscopic beings in the fibers of the paper; planted in a favorable medium, the micro-organisms multiplied and appeared active and full of life. Going still further, Galippe decided to investigate whether living organisms could be found in Egyptian papyri, more than 2,000 years old. It is known that the Egyptians made their papyrus from the epidermis of the sheaths and stems of *Cyperus papyrus*. The strips were joined together, pressed and superposed, and made imputrescible, and thanks to the perfect methods of manufacture, they have been able to resist the destructive action of time, even to the present day.

Galippe was able to study a fragment of papyrus of the Ptolemaic epoch, that is, dating back to about 200 B. C. The structural elements of the papyrus were unchanged and the vegetable cells and fibers of which it was built up were found intact. The cells had not only preserved their form and reciprocal relations, but in some of them were again found perfectly distinguishable micro-organisms. Quite curiously, after three hours' contact with sterile water, these micro-organisms, immobile for centuries, regained their activity and showed themselves endowed with motion. More than that, when placed in a favorable culture medium they multiplied, and their mode of development and the different phases of their evolution could readily be studied.

Administrative Meddling in Medical Affairs

Dr. J. Noir, editor-in-chief of the *Concours médical*, has just published a long protest against the administration's meddling in medical matters. He cites, among other documents, a circular addressed to the principals of the Paris schools for distribution to parents of children having diphtheria. The circular is entitled: "Instructions to Families on the Precautions to Be Taken Against Diphtheria." The first part of the circular, which mentions the dangers and method of transmission of the disease and the necessity for isolation of actual and suspected cases, can readily be approved. Unfortunately, there follows a chapter on the treatment of diphtheria, in which the statement is made that this consists in the disinfection of the throat and nose, the "haunts" of the bacillus, by gargling, irrigating, inhaling or atomizing of medicaments which are capable of destroying the micro-organisms. It is also stated that when there is great danger of contagion or isolation of the children is impossible, it is necessary to give a preventive injection of antidiphtheritic serum not only to the carriers of the bacillus, but also to all who have been exposed to infection. Finally, it is averred that preventive serotherapy in children, if employed by the family physician according to certain rules, is absolutely without danger.

Dr. Noir demands on what authority the author of the circular forces on family physicians disinfection of the nose and throat which is so often an illusory procedure, and on what authority is based the obtrusion of preventive serum injections, when some of the physicians of children's hospitals, and these not the least competent, are opposed to its systematic use, claiming that, during the incubation period, a preventive injection may diminish or even destroy the effect of a therapeutic injection which the attending physician may later be obliged to make. But what seems particularly regrettable in the circular is the underscored statement that preventive serotherapy at the hands of the family physician presents absolutely no danger if certain rules are followed. What are these rules (which have not, however, been specified) which give assurance of safety from anaphylaxis and other accidents that occasionally can assume a grave aspect? In the instructions accompanying the tubes placed on sale by the Pasteur Institute of Paris, one reads on the contrary that any injection of heterogenous serum may cause accidents, immediate or delayed, which sometimes require serious treatment. It is comprehensible that the foregoing circular, through the categorical statement which has been quoted, in case of even slight accident, risks discrediting the physician in the estimation of the family and greatly increases his responsibility.

LONDON

(From Our Regular Correspondent)

April 23, 1920

Village Tuberculosis Settlements

An important deputation has waited on the minister of health to urge the establishment of village settlements in connection with the treatment of discharged tuberculous soldiers. It was pointed out that sanatorium treatment for tuberculosis, even when accompanied by training in a suitable occupation, had been found inadequate as a means of combating the disease. The general experience had been that patients who return from a sanatorium to their homes and former occupations are unable permanently to earn a living or maintain health. The patients should pass through a threefold course: first, of sanatorium treatment; second, of training, and third, of permanent settlement in suitable surroundings. The village settlement should be a natural development of the sanatorium and training colony, and the patient should be in a position to look forward to being able, on completion of his course of treatment and training, to take up his permanent residence in a settlement where, still in close touch with the sanatorium, he could work under conditions that would enable him to maintain his health and have his family or dependents with him. In the settlement the patient and his family would have to be housed, the necessary workshops and other buildings would have to be provided, and—in the case of the civilian—the patient's earnings would have to be supplemented; but the community would gain in the result by the prevention of the spread of infection and the fact that the tuberculous patient would remain a productive worker. As illustrating the results of establishing a village settlement on these lines, it was stated that at the Cambridgeshire Tuberculosis Colony, out of thirty patients who had passed from sanatorium treatment and training into the settlement, not one had died in four years.

Dr. Addison, minister of health, assured the deputation of his good will. There were, however, various difficulties to overcome. The success of a village settlement would depend even more on the personality of the man in charge than on the material provision made. As regards finance, the provision of ten settlements for not less than 200 patients each, as proposed by the Interdepartmental Committee, would, he considered, cost much more than the sum of $5,000,000 suggested by it. Again, as minister of health he could not consider only the case of the ex-soldier; he had to consider also the civilian population, who had no pensions to supplement their earnings. Further, the Cambridgeshire Tuberculosis Colony was managed by a voluntary organization, but in the establishment of further settlements it would be necessary to rely in the main on local authorities. The problem was, therefore, one of much complexity; but a comprehensive scheme, dealing with all the various issues involved, was under discussion.

The Birth Rate

An address on "The Fertility of the Various Social Classes in England and Wales from the Middle of the Nineteenth Century to 1911" was given before the Royal Statistical Society by Dr. T. H. C. Stevenson, superintendent of statistics, General Register Office. He said it seemed likely

that large families promoted high mortality, and that high mortality promoted large families. It was evident that the decline in infant mortality during the present century was closely bound up with the decline in the birth rate. It was therefore all the more discreditable to the last quarter of the nineteenth century that during that period the rate of infant mortality did not decline, although the birth rate was steadily falling. In the deficient fertility of the classes which, having achieved most success in life, were presumably best endowed with the qualifications for its achievement, the nation was confronted with a new and formidable fact. The correspondence in time between the date of the Bradlaugh-Besant movement (1876) and the commencement of the fall in the birth rate in 1877 had always been obvious. The subsequent record of the decline was in fact precisely what might be expected on the supposition that it had been brought about through the neomalthusian views and methods having secured gradually increasing acceptance. After all allowances had been made, the professions, which formed the purest examples of middle-class occupations, were exceedingly infertile. The total fertility of all the professions tabulated, except nonconformist ministers, was underneath the lowest standard, though their very small rate of child mortality caused the clergy of the established church slightly to exceed that standard in regard to effective fertility. The exceptionally low figures for naval and military officers might be due to circumstances in their case rendering the maintenance of a family specially difficult; but the failure of this fine stock to reproduce itself was none the less to be regretted. The most remarkable instance of all was that of persons describing themselves as of "private means." In their case, presumably, the anxieties and difficulties which militated against fertility were at a minimum, but their fertility was also at a minimum. The reason might conceivably be that the more energetic and capable of the class referred to did follow some definite occupation, and that their fertility was higher than that of the inferior remainder of their class. The effect of female occupation in lowering fertility was clearly established. If we attributed to human volition the fall in the nation's fertility, these facts were readily explained; but if we refused to acknowledge this agency, it was necessary to assume the reduction of female fertility by nondomestic work as a law of nature.

VIENNA

(From Our Regular Correspondent)

April 24, 1920.

Present Sociological and Economic Conditions of the General Practitioner

As a result of the war, the general condition of the profession has suffered a severe change, which is felt keenly in all quarters. One of the chief undesirable effects is the enormous increase in the number of graduated physicians. As long as the army in the field required large numbers of physicians for the medical care of the huge numbers of diseased, disabled or otherwise ill soldiers, the study of medicine was much favored and encouraged by the military authorities, and the examinations were so facilitated that the war-doctors, as they were termed, had really only nominal teaching. Naturally, these men try to augment their defective knowledge now in hospitals. Thus it happened that all vacant appointments as junior officers in the hospitals, in the dispensaries and ambulatories are now filled by these doctors. They all also desire to practice. Furthermore, in those parts of the old Austrian empire which now have been allotted to the new or successory states, large numbers of physicians of German nationality had been practicing for years. They all had to leave, because national and racial hatred became too strong against them. All public appointments were, of course, given to physicians of the respective nationality, without paying too much heed to the qualification. Naturally the men who had been maneuvered out of their living fled to Vienna, only to increase there the numbers of insufficiently occupied practitioners. While in 1913 the population was 2,250,000, with nearly 3,000 physicians, now we have more than 4,000 men to minister to the ailments of only 1,860,000 inhabitants (census of Dec. 31, 1919). According to statistics compiled by the Vienna Medical Council for assessment purposes, only 20 per cent. of the total number earn enough to keep up the standard of life they were accustomed to formerly. A little more than 60 per cent. may just manage to make both ends meet by hard endurance; the remaining 20 per cent. have to undergo incredible privations. Hunger, want of proper clothing and of reading matter tend to drive them to pauperism and proletarianism. This is no exaggeration. The conditions are appalling. Many of the middle-aged men have lost their private practice through their five years' absence from home with the army or as prisoners of war. Lately, the public has shrunk back from calling in a physician because the fees have been raised, although they are only doubled or trebled. Still, if a man charges 25 kronen for a call, he gets only what is worth about 12 cents in American money. Only few practitioners can command fees of double that sum. Specialists are somewhat better off. The central medical organization tries to help whenever possible. By uniform action of all those concerned the organization succeeded, after a long struggle, in increasing the rate of payment of the panel or krankenkassen physicians (sickness insurance clubs). These men get now double payment, in some instances even 60 per cent. more than that, and, besides, part of their rent is paid for them. Their fixed salary reaches from 14,000 to 18,000 kronen a year, specialists getting from 24,000 to 26,000, which represents material help to the individual. In the hospitals also an improvement of the prevailing economic position of physicians has been obtained. Uniform cooperation of the juniors and seniors resulted in the acknowledgment of the rule that every work must have its price. A salary of 900 kronen a month, as well as the right to buy their board for a small sum, has been conceded to the juniors, who hitherto have been unpaid. It must be added, however, that the organization had prepared everything for a medical strike and that in spite of the adverse feeling against such an inhumane weapon, it would have been put into action had this become necessary. The profession is well aware here that its most powerful weapon must not be used except for the most overwhelming necessity. As the government is scheming socialization of the profession, the medical strike will come into question when the problem of "to be or not to be" has to be decided.

An important step to improve conditions has been made by obtaining the system of free choice of physician for a large number of "panel" societies. Various unions of earning people tried to simplify matters for themselves by appointing a special physician for their members. The organization, however, endeavors to let all physicians participate in the possibility by encouraging such unions to adopt the system that permits the patient to call in the man whom he trusts without undue expense to himself, at the same time enabling the physician to be sure of his payment. Thus the civil service men, the postmen and the tramway men have agreed to this system, with fairly satisfactory results to both parties. On the other hand, a serious struggle is going on between the organization and the state as to the upper wage limit of the members of compulsory sickness insurance clubs (krankenkassen). While the physicians want all men earning more than 24,000 kronen a year to be excluded from the panel, the other side wants to fix the limit at 48,000 kronen.

This would mean the end of private practice altogether, for the majority of laborers earn now between 24,000 and 48,000 kronen a year, while the classes hitherto called middle class have dropped out and drift hopelessly into pauperism. A complete shifting of the social strata has taken place, and the members of the profession are victims of this shifting, too. Many physicians had to apply for and accept gifts of charity, which are being tendered them in a most gracious and generous way from all parts of the world, neutral as well as previously enemy. Apart from other help, it must be mentioned how nobly the profession of Holland acted, by inviting several hundred children of Austrian physicians to Holland, where they remained three months and restored their semistarved, anemic bodies and their depressed souls. The average gain of weight was 6 kilograms (13 pounds) per child, and of growth, 5 cm. (2 inches). This shows how urgently the children needed the vitamins owing to the lack of milk, fat and eggs at home. Another noble deed was that of the Norwegian profession, whose members have sent several railway cars full of provisions for the Vienna physicians, containing fish, meat, chocolate, condensed milk, fat and flour. That this gift was gladly accepted proves under what stress large numbers of us are living here; it may be added that the "export" of physicians' children has been organized on a large scale for the summer time. Holland, Norway, Sweden and Switzerland vie with one another in magnanimous help for our profession.

Clinical Courses in the Summer Term

The official catalogue of the medical faculty of the Vienna University announces no less than 448 different classes and courses, given by twenty-one ordinary, 113 extraordinary professors and 152 assistants, and open to all students of the university on payment of the regular fees. It may be explained that ordinary professors are those who have been appointed as regular clinical teachers in a clinic, while the extraordinary professor has no clinic of his own, but is more of a guest at a clinic, but may have a ward under his special care. The fees have been raised now by an order of the board of instruction about six times more than they were before the war, and the postgraduate classes, ten times. This is very much for our students, but a trifle for the American or foreign physician. A private course costing 1,000 kronen costs, at the present rate of exchange, $5; for this sum a quite first class course may be obtained. There will be delivered eight classes on physiology, thirty-five on pathologic anatomy, eighty-one on general pathology, forty-six on surgery, twenty-two on rhinolaryngology, twenty-nine on otology and forty-one on diseases of the skin, besides numerous others. On radiology only twelve classes will be held, but in the near future this branch of our art will be much better cared for, as it is intended to organize a huge central radiologic institute for all the public hospitals of Vienna, so as to insure the services of absolutely competent men for this important branch of medicine. There also the comparatively enormous quantities of radium and its active compounds, which are available in Vienna, will be turned to suitable use, enabling earnest studies to be conducted with them.

Statistics of the Winter Term

In 1919-1920 the winter term of the university lasted from October to March; 4,282 ordinary students and 221 extraordinary studied medicine in Vienna, among them 578 women. The previous term the figures were 3,823, with 557 women and 126 foreign students. The constant increase of medical students is well marked since 1910, and went up by bounds since 1915. The number of physicians has been increasing since 1915 far more rapidly than the increase of population, which has been practically nil for two years.

Deaths

Henry Holbrook Curtis ● New York City; Yale University, New Haven, Conn., 1880, aged 63; a specialist in laryngology and otology; visiting laryngologist to the New York Throat, Nose and Lung Hospital; consulting otologist to the Nassau County Hospital, Long Island, and consulting laryngologist to the Minturn Diphtheria and Scarlet Fever Hospital; a member and once president of the American Laryngological, Rhinological and Otological Society and New York Academy of Medicine, and a member of many foreign otological, laryngological and rhinological societies; died, May 15.

Don DeForest Grout, Waterbury, Vt.; University of Vermont, Burlington, 1872; aged 70; for eleven years superintendent of the Vermont State Hospital for the Insane, Burlington; consulting physician to the Fannie Allen Hospital, Burlington; local surgeon of the Central Vermont Railway; health officer of the town of Waterbury; president of the Vermont State Tuberculosis Commission, and vice president of the Vermont Society for the Prevention of Tuberculosis; a member of the legislature in 1888; died, April 19, from angina pectoris.

Salphronius H. French ● Amsterdam, N. Y.; Albany (N. Y) Medical College, 1859; aged 82; formerly consulting surgeon to the Amsterdam Hospital; surgeon of United States Volunteers during the Civil War; for several years health officer of Amsterdam, and president of the Amsterdam City Library; one of the founders and since 1887 president of the Amsterdam Savings Bank; died, April 30, from angina pectoris.

Charles M. Lutterloh, Jonesboro, Ark.; Vanderbilt University, Nashville, Tenn., 1890; aged 57; a member of the Arkansas Medical Society, and president of the Tri-State Medical Association of Tennessee, Arkansas and Mississippi in 1911; vice president of the American Trust Company, Jonesboro, and president of the Craighead County Board of Health; died, May 3, from heart disease.

Marshall Lebanon Brown, Brooklyn; Dartmouth Medical School, Hanover, N. H., 1867; aged 82; a member of the Massachusetts Medical Society; for three years surgeon of the Sixty-Ninth New Hampshire Volunteer Infantry, during the Civil War; for many years a practitioner of Boston; died at the home of his daughter in Flatbush, L. I., May 5, from heart disease.

William Brown Ewing ● Salt Lake City, Utah; Rush Medical College, 1885; aged 60; secretary of the Utah State Medical Association from 1912 to 1917; a specialist in neuropathy; captain, M. C., U. S. Army, and discharged, Jan. 8, 1919; examiner of the insane for the third district court; died in St. Mark's Hospital, Salt Lake City, April 24, from heart disease.

Frederick Sohon ● Washington, D. C.; Georgetown University, Washington, D. C., 1888; aged 53; captain, M. R. C., U. S. Army; professor of physical diagnosis in his alma mater; a medical officer of three expeditions under the command of the late Commander Peary, U. S. Navy, to the Arctic regions in 1897, 1903 and 1905; died, May 7.

Thomas James McCrory ● Racine, Wis.; Northwestern University Medical School, Chicago, 1905; aged 42; lieutenant, M. C., U. S. Army, and discharged Feb. 21, 1918; who was injured in an automobile accident, May 2, died in St. Mary's Hospital, Racine, from his injuries, May 5.

Alfred Jones, Cornersville, Tenn.; University of Nashville, Tenn., 1858; aged 81; a member of the Tennessee State Medical Association; a Confederate veteran; for two terms a member of the House of Representatives and for three terms a member of the state senate; died, April 16.

George Latham Underwood, Belmont, Mass.; Harvard University Medical School, 1858; a member of the Massachusetts Medical Society; superintendent and resident physician at the State Hospital, Rainsford Island, for several years; died recently.

John Ralph Pattee ● Dover, N. H.; Eclectic Medical Institute, Cincinnati, 1888; aged 59; county physician of Merrimack County, N. H., and chairman of the board of health; died in the Wentworth Hospital, Dover, April 27, from cerebral hemorrhage.

Emile Poirier, Salem, Mass.; Laval University, Quebec, 1881; aged 63; a member of the Massachusetts Medical

● Indicates "Fellow" of the American Medical Association.

Society; one of the commission that had charge of the rebuilding of Salem after its devastation by fire in 1914; died, April 29.

Thomas Davidson Starbuck, Davenport, Iowa; State University of Iowa, Iowa City, 1902; aged 48; a member of the Iowa State Medical Society; [illegible] in Mercy Hospital, Davenport, May 11, from septicemia following the extraction of a tooth.

Benjamin Lucky Branch, Collierville, Tenn.; Memphis (Tenn.) Hospital Medical College, 1883; aged 63; a member of the Tennessee State Medical Association; president of the alumni association of his alma mater in 1909; died, April 25.

Robert N. Downs, Philadelphia; University of Pennsylvania, Philadelphia, 1856; aged 90; for many years a member of the consulting staff of the Germantown Hospital; a member of the College of Physicians of Philadelphia; died, May 1.

John William Bush ● Hot Springs, Ark.; University of Tennessee, Nashville, 1906; aged 51; lieutenant, M. R. C., U. S. Army, and discharged Jan. 3, 1919; a specialist in urology; was shot and killed by his brother-in-law, April 27.

George Miller Beard, Horseheads, N. Y.; College of Physicians and Surgeons in the City of New York, 1866; aged 80; a veteran of the Civil War; once a member of the New York General Assembly; died, May 1.

Alfred Kimball Hills, New York City; Hahnemann Medical College, Philadelphia, 1870; aged 79; for many years editor of the *Medical Times* and a member of the New York Academy of Medicine; died, May 2.

William J. Mairs, Newton, Mo.; Louisville (Ky.) Medical College, 1878; aged 65; a member of the Missouri State Medical Association; formerly a member of the state legislature; died, April 6, from carcinoma.

Adolph Zederbaum ● Los Angeles; University of Berlin, Germany, 1883; University of Dorpat, Russia, 1887; aged 71; died on the operating table in Methodist Hospital, Los Angeles, May 1.

William Barber Fellers, Roanoke, Va.; University of Maryland, Baltimore, 1910; aged 35; a member of the Medical Society of Virginia; died, April 23, from carcinoma of the kidney.

Zeba Darling French, Lawrenceville, Ill.; University of Iowa, Keokuk, 1865; aged 82; surgeon of the Third U. S. Volunteer Cavalry (colored), during the Civil War; died, April 27.

Mason Beach Hughes, Bloomsburg, Pa.; Jefferson Medical College, 1869; aged 78; formerly a member of the legislature from Luzerne County; died in a hospital in Philadelphia, May 6.

James Garland Boxley, Louisa, Va.; Medical College of Virginia, Richmond, 1863; aged 77; assistant surgeon in the Confederate Navy during the Civil War; died, April 23.

John Francis Canavan, Bridgeport, Conn.; Eclectic Medical College, Cincinnati, 1913; aged 32; died at the Wallum Lake (R. I.) Sanatorium, April 20, from tuberculosis.

B. S. Hunt, Sidney, Ohio; Pulte Medical College, Cincinnati, 1877; aged 69; president of the American Chemical Company; died, April 24, from cerebral hemorrhage.

William L. McGrew, Warren, Ohio; College of Physicians and Surgeons, Baltimore, 1890; aged 73; also a clergyman of the Methodist Episcopal Church; died, April 21.

Joab Stowell, Jr., North Amherst, Mass.; University of Minnesota, Minneapolis, 1890; aged 57; a member of the Massachusetts Medical Society; died, March 26.

Elizabeth S. Horr, Waterford, Me.; Woman's Medical College of the New York Infirmary for Women and Children, New York City, 1872; aged 87; died, April 8.

John S. Holley, Bellevue, Macon, Ga.; Atlanta (Ga.) Medical College, 1882; aged 63; at one time city health officer of Tyler, Texas; died, April 20, from nephritis.

Edward Louis Miller, Mount Dora, Fla.; University of Maryland, Baltimore, 1884; aged 61; for many years a practitioner of Johnstown, Pa.; died, April 23.

John J. Patterson, Boaz, Ala.; Georgia Eclectic Medical College, Atlanta, 1878; aged 74; died in Etawah County, Ala., March 29, from cerebral hemorrhage.

Harry Gove, St. Andrew's, N. B.; College of Physicians and Surgeons in the City of New York, 1867; aged 74; died, January 28, from chronic gastritis.

William H. Snyder, Hastings, Mich. (license, Michigan, fourteen years of practice, 1900); aged 79; died, April 29.

Jonathan Price, Anna, Ill.; University of Tennessee, Nashville, 1882; aged 72; died, April 23, from septicemia following an infected wound of the foot.

Henry Kelby Gardiner ● Wakefield, R. I.; Dartmouth Medical School, Hanover, N. H., 1882; aged 63; died, April 30, from carcinoma of the liver.

William Allen Barnes, Martinsburg, W. Va.; Hahnemann Medical College, Philadelphia, 1895; aged 54; died, May 1, from pernicious anemia.

Esom G. Farris, St. Cloud, Fla.; Central College of Physicians and Surgeons, Indianapolis, 1883; aged 77; died, February 6, from influenza.

Wade Emmett Simpson, Indianapolis; University of Indianapolis; 1903; aged 42; died in Martinsville, Ind., May 3, from valvular heart disease.

William Henry Harrison Palmer, Napa, Calif.; Willamette University, Portland, Ore., 1889; aged 79; died, April 15, from senile debility.

Samuel Corbus Helmick, Commercial Point, Ohio; Miami Medical College, Cincinnati, 1871; aged 71; died, April 28, from heart disease.

Joel R. Davis, Marion, Ind.; Curtis Physio-Medical Institute, Marion, Ind., 1899; aged 80; died, April 18, from bronchopneumonia.

Luther Alvin Davis ● Wadena, Minn.; University of Minnesota, Minneapolis, 1901; aged 42; died, April 22, from Addison's disease.

Joseph H. Hooper, Dallas, Texas; University of Nashville, Tenn., 1866; aged 79; died in Thorp Springs, Texas, March 28, from senility.

Leidy Shimer Hagerty, Arlington, N. J.; University of the South, Sewanee, Tenn., 1900; aged 44; died, April 21, from heart disease.

Jesse D. Garr, Summitville, Ind.; Eclectic Medical Institute, Cincinnati, 1896; aged 63; died, April 15, from acute gastritis.

Ovila Clement Gelineau, Indian Orchard, Mass.; Baltimore Medical College, 1894; aged 48; died, March 29, from diabetes.

William H. Young, Springdale, Ark.; Kansas City (Mo.) Medical College, 1883; aged 73; a Confederate veteran; died, April 7.

Harwin O. Rockwell, Crown Point, Ind.; Chicago Medical College, 1881; aged 70; died, May 4, from valvular heart disease.

Edwin Llewellyn Chase ● Shrewsbury, Mass.; Baltimore University, 1898; aged 47; died in Smyrna, Me., April 29.

William L. Stone ● Pittsburgh; University of Pennsylvania, Philadelphia, 1880; aged 61; died, April 21.

John William Heacock, Talladega, Ala.; Tulane University, New Orleans, 1867; aged 83; died, April 27.

R. F. Harnesberger, Beckville, Texas; Medical College of Georgia, Augusta, 1884; aged 62; died, April 19.

John Magee, Troy, N. Y.; College of Physicians and Surgeons, Baltimore, 1880; aged 64; died, April 19.

John B. Cunningham, Norwich, Conn.; University of Vermont, Burlington, 1890; aged 52; died, April 1.

William A. Stephens, Cleveland; Western Reserve University, Cleveland, 1887; aged 59; died, April 15.

W. J. Trask, Great Cacapon, W. Va. (license, West Virginia, 1881); aged 62; died about April 23.

James Richards, Omaha; Missouri Medical College, St. Louis, 1890; aged 75; died, April 15.

Marriages

MARCUS BEEKMAN, Natchez, Miss., to Miss Lena M. Triche of Newellton, La., at Natchez, March 27.

NEIL SEWELL MOORE, St. Louis, to Miss Helen Hereford of Springfield, Ill., April 10.

GEORGE MICHAEL FITZGERALD to Miss Eileen Phelan, both of Chicago, recently.

NELSON MILES HOLDEN to Miss M. Alice Stengle, both of Brooklyn, May 3.

JACOB A. KOHN to Miss Jeanette Herma Schultz, both of Chicago, May 6.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE FRAUD ON THE PUBLIC AND ON THE PROFESSION

MORE MISBRANDED NOSTRUMS

How the Bureau of Chemistry Is Protecting the Public Against "Patent Medicines" Sold Under False and Fraudulent Claims

Seelye's Ner-Vena.—A quantity of this product, shipped in January, 1917, by the A. B. Seelye Medical Co. of Abilene, Kan., was analyzed by the Bureau of Chemistry, which reported that the preparation was a syrup containing alcohol and vegetable extractives among which were those of juniper, wild cherry, senna, gentian, sassafras, uva ursi (bearberry) and cinchona. "Seelye's Ner-Vena" was sold as a cure for pimples, loss of memory, "tired feeling," locomotor ataxia, bed wetting, female complaints, premature old age, malaria, pericarditis, impaired vision, hysteria, nasal catarrh and several other conditions. Naturally these claims were declared false and fraudulent. In March, 1919, the company pleaded guilty and was fined $10 and costs. — [*Notice of Judgment No. 6766; issued April 20, 1920.*]

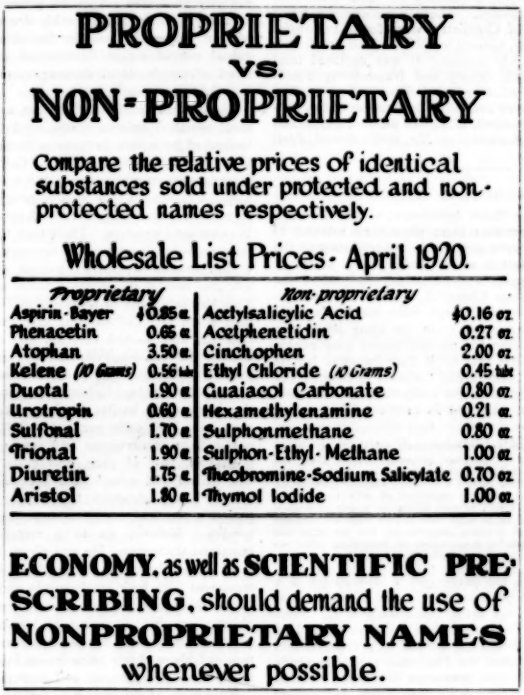
Hill's Rheumatic Pills. — These pills were shipped in June, 1917, by Harriet W. Belden, who traded as the H. W. Belden Co., Minneapolis, Minn. The federal chemists reported that analysis showed the pills to consist of vegetable extracts, including aloes, and 5 per cent. of mineral salts. They contained no salicylates, carbonates, iodids, bromids, alkaloids, ammonia or guaiac. "Hill's Rheumatic Pills" were falsely and fraudulently represented as a cure for rheumatism, neuralgia, gout, erysipelas, eczema, syphilis, pyorrhea, etc. In April, 1919, Harriet W. Belden pleaded guilty and was fined $10.—[*Notice of Judgment No. 6770; issued April 20, 1920.*]

Jenkins' Rheumatism, Gout and Neuralgia Annihilator.—The Parker-Blake Co., Ltd., New Orleans, La., shipped in October, 1917, a quantity of "Jenkins' Rheumatism, Gout and Neuralgia Annihilator." The federal chemists reported that analysis of the product showed that it contained over 46 per cent. alcohol, 1.5 per cent. salicylic acid, resinous plant extract and water. It was sold under the claim that it was a cure for acute and chronic articular rheumatism, muscular rheumatism, internal rheumatism, neuralgia, gout, paralysis and sciatica. These claims were declared false and fraudulent. In June, 1919, the company pleaded guilty and was fined $10. —[*Notice of Judgment No. 6771; issued April 20, 1920.*]

Short Stop.—Henry M. O'Neil of New York City shipped a quantity of "Short Stop" in August, 1917. This, when analyzed by the Bureau of Chemistry, was reported to be a syrup containing licorice and wild cherry extracts, ammonium carbonate, small amounts of an antimony salt, benzoic acid, camphor, oil of anise and traces of an unidentified alkaloid. It was falsely and fraudulently represented as a cure for pneumonia, consumption, bronchitis, colds, hoarseness and all throat and lung troubles. In January, 1919, O'Neil pleaded guilty and was fined $15. — [*Notice of Judgment No. 6777; issued April 20, 1920.*]

Antiseptine. — The Cal-Sino Co., Baltimore, Md., shipped in March, 1918, a quantity of "Antiseptine." The Bureau of Chemistry reported that analysis of "Antiseptine" showed that the stuff was a powder composed essentially of about 48 per cent. anhydrous zinc sulphate, with about an equal amount of lead acetate, together with a small amount of copper acetate. "Antiseptine" was falsely and fraudulently represented as a cure and specific for fistulas, when in truth and in fact it was not. In October, 1919, the company pleaded guilty to this charge and also to the charge of misbranding a remedy sold for sick horses. It was fined $100 and costs.—[*Notice of Judgment No. 6810; issued April 23, 1920.*]

Cassidy's 4X and P. G. S.—The Schuh Drug Co., Cairo, Ill., shipped in December, 1916, and April, 1917, a quantity of "Cassidy's 4X" and "P. G. S." The federal chemists reported that "Cassidy's 4X" was found to consist essentially of aloes, colocynth, resins and a small amount of some mercury salt, alcohol and water; "P. G. S." was reported to consist of plant extract, including extract from a laxative drug, resin and not more than a trace, if any, of mercury, alcohol and water. Both "Cassidy's 4X" and "P. G. S." were falsely and fraudulently represented as cures for eczema, syphilitic affections, rheumatism, malarial poison and all affections of the skin caused by impure blood and as a relief for kidney and bladder dis-



This is a greatly reduced reproduction of one of numerous posters shown at the New Orleans meeting in the A. M. A. Chemical Laboratory Exhibit. The original measured 22x28 inches. It is reproduced at the request of a large number of physicians who visited the exhibit.

eases. In October, 1918, the Schuh Drug Company pleaded guilty and was fined $25 and costs.—[*Notice of Judgment No. 6841; issued April 23, 1920.*]

Hall's Canker and Diphtheria Remedy.—This product, which was said to have been shipped in August, 1918, by Selena D. Hall, Salt Lake City, Utah, was labeled as "an infallible remedy for diphtheria," a statement which, of course, was false and fraudulent. No claimant appearing for the property, the court entered a judgment of condemnation and forfeiture in December, 1918, and ordered that the product should be destroyed by the United States marshal.—[*Notice of Judgment No. 6836; issued April 23, 1920.*]

Red Cross Pile Cure.—William Davidson Rea, who did business at Minneapolis, Minn., under the name of Rea Bros. & Co., shipped in June, 1917, a quantity of "Red Cross Pile Cure" which was misbranded. These suppositories when analyzed by the Bureau of Chemistry, were found to consist essentially of cocoa butter, tannin, menthol, a lead compound, iodid, sulphate and possibly acetate. It was declared misbranded because the labels falsely and fraudulently represented it as a cure for blind, bleeding, itching and protruding piles, fistula, fissures, ulcers and all inflammation of the rectum and lower bowel. In April, 1919, Rea pleaded guilty and was fined $5.—[*Notice of Judgment No. 6842; issued April 23, 1920.*]

"COTTON PROCESS ETHER"

In the Query and Minor Notes department of THE JOURNAL of February 21 some inquiries from physicians relative to "Cotton Process Ether" were answered. In referring to the composition of this product it was stated that the secretary of the Council on Pharmacy and Chemistry had asked the manufacturers, the Du Pont Chemical Works, for information on this point and one paragraph from the firm's reply was quoted. Another paragraph from the same letter was omitted and to this omission the manufacturers took exception, expressing the opinion that by it THE JOURNAL led its readers to infer that the concern had "refused to furnish any information whatever" regarding the composition of the ether. The following paragraph, italicized as in the original letter, is the one in question:

"Cotton Process Ether contains no components which do not occur in other anesthesia ethers. Its peculiar properties result from the thorough methods taken to exclude harmful impurities, such as aldehydes, peroxides, traces of acids, carbon monoxide, sulphur compounds, etc., and to include carefully regulated quantities of only such of the usual components as we have found to give distinctly beneficial properties to the ether. We are willing to state that in this class we consider properly prepared ethylene of greatest importance, but we have not announced which of the beneficial components of anesthesia ether we include in our ether, or the amount of such components."

As the quotation shows, the paragraph is informative in a negative rather than in a positive way in that it states what Cotton Process Ether *is not* rather than what it *is*. Since that time, however, the manufacturers have notified THE JOURNAL that they have definitely decided to present Cotton Process Ether to the Council on Pharmacy and Chemistry for consideration and that in preparing the data required by the Council will define Cotton Process Ether as follows:

"An improved anesthesia ether consisting of highly refined diethyl oxid ($(C_2H_5)_2O$), plus approximately two volumes of ethylene (C_2H_4), ½ volume of carbon dioxide (CO_2), and 1 per cent. by weight of ethyl alcohol."

Spread of Vincent's Angina to Ear.—Dr. M. Ottoni de Rezende publishes in the *Boletim da Sociedade de Medicina de S. Paulo*, Brazil, a case of gangrenous perichondritis of the ear and otitis media from invasion by fusospirillar infection from the throat. Almost the entire ear and vicinity sloughed off down to the rear wall of the tympanic cavity. The other ear also showed beginning otitis media. Under local treatment with neutral solution of chlorinated soda and Peruvian balsam, and intravenous injection of neo-arsphenamin, the process was arrested and healed, but the child succumbed later to the cachexia and autointoxication.

Correspondence

OBSERVATIONS SUGGESTED BY "SYPHILITIC SCARS OF THE SPIRIT"

To the Editor:—Apropos of Dr. Collins' scholarly and altogether sympathetic case report chronicled in his recent communication (Syphilitic Scars of the Spirit, THE JOURNAL, May 1, 1920, p. 1216), one notes an admirable drawing of disease effect on that more elevated, moral entity (soul, spirit) which exists beyond purely mental cerebration. Yet I have wondered in respect to his conclusion of "miscarriage of therapeutic justice and mockery of studied effort" why the soul scar was stressed alone. Deterioration of mental capacity presented a fact the patient, himself, recognized as do many who are more frankly demented. Perhaps comment was so shaped because in the usual summing up of individual mental defect, intellectual capacity is alone emphasized, although moral disintegration, in some degree, is an invariable concomitant.

The case in question offers, too, a thought regarding treatment which I believe holds good today very often and is spoken of here only because, although not the attending but the consulting physician, Dr. Collins' detailed recital of treatment given makes the instance serve well as an example. Thus, it is related that months previous to the first symptom of meningeal irritation the blood serum had shown a ++++ Wassermann reaction. Thereupon this patient received forty intramuscular injections of mercury. Two months previous to his attacks of vertigo, nausea and development of conspicuous mental symptoms, a facial paralysis had supervened. This had improved to some extent, but was still quite noticeable when Dr. Collins first saw the patient. Also, at this time the man looked very ill, was emaciated and pale, and during the examination was bathed in perspiration. The patient at this time weighed 98 pounds, his ordinary weight being 130 pounds. Laboratory tests were corroborative of the diagnosis of basilar meningo-encephalitis, the spinal fluid containing 150 cells per cubic millimeter. Treatment was changed to intravenous and intraspinal injections of arsphenamin, two of each, and daily inunctions of mercury. The serum and spinal fluid became negative, and the cells of the latter dropped to 11 per cubic millimeter. The patient's physical condition improved much, and his mental condition bettered up to a certain point, and thereafter remained stationary. He was given further intravenous injections of arsphenamin. Later in a sanatorium, antisyphilitic treatment with both arsphenamin and mercury was continued for another six weeks. Four months after coming under observation, his attending physician again put him under treatment continuing for about a year. Altogether the patient received about thirty intravenous injections, four intraspinal, and scores of injections and inunctions of mercury.

Repetition of this detail is set down because it brings out the patent fact of somewhat mechanical therapeutic procedure, although the use of the laboratory addressed to serologic conditions exhibits apparent scientific management. First, despite evidence of nonassimilation and reaction to mercury in the single manner initially given, no change of method is made in the face of disease progress shown by cranial nerve involvement and general physical deterioration. When arsphenamin injections are begun, an immediate betterment accrues to a degree and then stops. Nevertheless, thereafter it is arsphenamin, mercury and Wassermann test until arrival of that time which makes further attention appear useless.

Has this procedure, even after turning to arsphenamin for aid, lacked something in the interest of the patient? I think

so, and exactly that coefficient which is now so frequently lost sight of. Good clinicians and therapeutists of an earlier day, without the guidance of the identification of *Spirochaeta pallida*, the Wassermann reaction and the striking benefits of arsphenamin, and therefore more dependent on clinical watchfulness and tardier effects of mercury and iodin, would probably have adopted a less routine method. For the patient whose physical condition was below par, bed rest and full feeding was prescribed when it could be had, but particularly, when therapeutic effect from mercury became stationary "alteratives" were given. In the days of Rush, red clover, stillingia, burdock root, etc., were for a time substituted for actual specific treatment. Twenty-five years ago in clinics such as Neumann's or Kaposi's, Zittmann's decoction was given as interim medication between courses of mercury. Why? In modern vernacular, the handy phrase "to increase resistance" comes as a ready answer. To what? In an older day one would need to have said to the disease itself; today to the pale spirochete. This, however, was not the real thought. These clinicians noted that after "alterative treatment" (and an improved general condition), the system reacted anew to mercury and potassium iodid. Today we may theorize as to cause, saying, perhaps, that we thus reactivate essential organs of internal secretion. They knew nothing of these things, but held strongly to the lessons of experience and acted in accordance with them. The present day practitioner has great advantages over his elders who were without laboratory aids, but it would seem that just because of the diversions arising from the latter the modern sometimes becomes mechanical as to therapeutic concepts and hence, at times, falls short in respect to best treatment continuity.

BERNARD OETTINGER, M.D., Long Beach, Calif.

"POISON IVY, OAK AND SUMAC"

To the Editor:—The editorial in THE JOURNAL, May 1, p. 1258, leads me to put together a few notes on my experience and observations. Poison ivy does not affect me unless there has been an unusual or prolonged exposure. When I first came to northern Indiana and found the swamp sumac or poison tree (*Rhus venenata* or *vernix*) I assumed that I was equally immune to this species of rhus and did not hesitate to break off a small branch for my herbarium—a proceeding I never repeated, for the next day I had a severe dermatitis of the hands, face "and elsewhere." Of course, I tried the remedies given in the books; but it was a week and more until the swelling subsided and another week until I was through shedding.

Once a year at least I go to the tamarack swamps (now almost extinct) to botanize; here the swamp sumac is common. In spite of all effort at prevention or avoidance I am usually poisoned more or less severely. For a long time I found no good remedy, no "cure"—only palliatives.

One year I had an unusually severe attack and then experimented freely. Among other things I applied a dilute solution of liquor formaldehydi to one hand, but this "set the skin afire" and required the soothing application of phenol solution; the cure was worse than the disease. Greatly to my surprise there was a marked improvement the next morning—almost a cure. It then occurred to me to combine phenol with the formaldehyd. The other hand was treated, and with equally good result.

Since then I have used this treatment as a matter of routine. I found that by freely applying a solution on coming out of the swamps there was no eruption, no poisoning at all.

I prepared a solution for dispensing. My usual formula is: liquor formaldehydi, 5 c.c.; saturated aqueous solution of phenol, 10 c.c.; distilled water to make 100 c.c. (To this may be added a drop of methylene blue solution, as blue is a color that leads people to pause about using internally. To disguise the phenol odor, to which some object, a drop of some essential oil may be added).

In dispensing I supply a 4-dram vial with a swab in the cork and with the directions: Apply freely the first time; after that use sparingly every few hours, as needed.

Need it be added that a remedy that is "a power for good" may also be a power for evil? Some patients act on the principle that, if a little is good, more is better. The hardening or tanning effect of formaldehyd must be considered and explained to patients. The earlier the solution is applied, the better the effect.

ROBERT HESSLER, M.D., Logansport, Ind.

To the Editor:—Your editorial of May 1 on "Poison Ivy, Oak and Sumac" was of interest to me, as I was one of the unfortunate ones susceptible to poison ivy, etc. When about 10 years old I had a beautiful dose, covered from head to foot, eyes closed, etc.

A solution of zinc sulphate was used on my eyes that immediately dried off all of the poison ivy vesicles around the eyes. Since practicing medicine I have used it hundreds of times with good results. All irritation or even eruption can be prevented if it is used immediately after exposure. If used within twenty-four hours after exposure or ten hours after the appearance of the vesicles, it will abort the attack. If the case is not seen until the deeper layers of the epidermis are involved, the cure is slower but just as sure. To abort an attack, use 10 grains of zinc sulphate to 1 ounce of water. For later treatment, use half strength.

S. W. IRVING, M.D., New Britain, Conn.

To the Editor:—Relative to "Poison Ivy, Oak and Sumac" I have had splendid results from the use of equal parts of gum camphor, crystal phenol and the plain hydrocarbon oil, thoroughly rubbed in. Generally one application a day for two or three days is sufficient. It is to be understood that it is not to be applied over too extensive an area of skin surface at one time; also, in some cases a little more of the oil could be used, and in other cases less oil would give better results; but in most cases, equal parts of each will do the work.

ALBERT E. STOLER, M.D., Fort Wayne, Ind.

"BOTULISM DUE TO OLIVES"

To the Editor:—With reference to the questions concerning botulism raised in your editorial (THE JOURNAL, May 1, p. 1261), it may be desirable to answer the questions as fully as possible. The strain of *Bacillus botulinus* isolated from the Richmond, Calif., poisoning case was identified by Dr. Dickson as Type A, (too late for inclusion in the paper, p. 1220). The relish concerned in that poisoning case was made from ripe olives. The title of the paper was inclusive of the cases mentioned. The stuffed olives described were ripe olives stuffed. A certain portion of the ripe olives produced are marketed as stuffed olives. Pure culture experiments with *Bacillus botulinus* are accompanied by an objectionable odor. These odors are intensified when other organisms are present, as is usually the case. The doubtful character of odor as a safeguard must be recognized, but it must also be recognized that the physical examination of the can, including evidence of swell, turbidity, disintegration and odor, is the sole dependence of the ordinary consumer to protect himself against spoiled food. The reason for emphasis on the evidences of spoilage in our various publications has been confidence based on our observations that rigorous care in making the examinations required would

have prevented most, if not all, of the poisoning cases with which we have come in contact.

CHARLES THOM, PH.D., Washington, D. C.
Mycologist, Bureau of Chemistry, U. S. Department of Agriculture.

THERMOREGULATION OF REFRIGERATORS

To the Editor:—Having experienced a great deal of difficulty in the regulation of temperature of an ammonia and brine refrigerator, I wish to give my solution of the problem in the hope that other laboratories may benefit thereby. The thermoregulator installed in our refrigerator proved unsatisfactory and defective. On inquiry it appeared that the difficulty was that compressed air was used to open the valve admitting the chilled brine to the pipes. The compressed air entered the thermoregulator by a very fine port which was constantly becoming plugged by moisture and rusting. Learning this, we simply introduced a wash bottle of sulphuric acid into the air system before it reached the port. Since this wash bottle was installed, our refrigerator has not varied 3 degrees in temperature. We have used this device now for six months and find it entirely satisfactory.

LAWRENCE W. STRONG, M.D., New York.
Pathologist, Woman's Hospital.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

POISONING BY MERCURIC CHLORID DOUCHES

To the Editor:—In THE JOURNAL, May 1, 1920, p. 1227, Dr. P. B. Bland of Philadelphia reported three very interesting cases of mercuric chlorid poisoning from vaginal injections. I am making a study of such cases and would appreciate the courtesy if you could furnish me with additional references from your journal or other journals or any medical works; also cases in which a saturated sponge or other mechanical device, together with mercuric chlorid, have been used. I have found a paragraph in Jewett's Obstetrics, but have not been very successful in finding other articles on the subject.

E. E. BRATTON, M.D., Philadelphia, Pa.

ANSWER.—Following is a list of articles on this subject:

Fitzgibbon, G.: Poisoning from Mercury Tablet Introduced in Vagina, *Lancet*, March 16, 1918; abstr. *Dublin J. M. Sc.*, April, 1918.
Conaway, W. P.: Fatal Case of Mercury Poisoning from Vaginal Absorption, *J. M. Soc. New Jersey*, March, 1917.
Buckman, F.: Case of Mercuric Chlorid Poisoning Due to Vaginal Douches, THE JOURNAL, Feb. 14, 1914, p. 535.
Baux, G., and Roques, E.: Fatal Mercurial Poisoning from Intra-Uterine Injection, *Rev. mens. de gynéc., d'obstét. et de pédiat.*, January, 1912; *Obstétrique*, March 9, 1912, p. 740.
Mabbott, J. M.: Mercuric Chlorid Poisoning, Associated with Secondary Hemorrhage from Vaginal Douche, Given Seven Days After Delivery, THE JOURNAL, Aug. 19, 1911, p. 648.
Lankford, Burnley: A Peculiar Case of Mercurial Poisoning, THE JOURNAL, April 9, 1910, p. 1203.
Shrap, W. H.: The Careless and Criminal Use of the Mercuric Chlorid Tablet, THE JOURNAL, April 30, 1910, p. 1459.
Patek, Arthur J.: Poisoning by Mercuric Chlorid Through Vaginal Douches, THE JOURNAL, June 4, 1910, p. 1867.
Poisoning by Sublimate Tablets, Editorial, THE JOURNAL, June 4, 1910, p. 1877.

DUCTLESS GLAND DISTURBANCES IN U. S. SOLDIERS DURING THE EUROPEAN WAR

To the Editor:—Being interested in material on diseases of the glands of internal secretion in U. S. soldiers in our army camps and at the front during the European war, I should feel much indebted to any physician who served as a medical officer in the army during the war who might be able to supply me with information in regard to this matter, particularly statistical relations, semeiology, the incidence of these diseases in drafted men and in enlisted men who were subsequently on duty, and the measures taken in dealing with such cases. Any help I may receive in this matter will be highly appreciated and acknowledged.

JAMES ROSS CHURCH, M.D.,
Army Medical Museum, Washington, D. C.
Colonel, M. C., U. S. Army; Secretary Treasurer, Association of Military Surgeons.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ARIZONA: Phoenix, July 6-7. Sec., Dr. Ancil Martin, 207 Goodrich Bldg., Phoenix.
CALIFORNIA: San Francisco, June 28-July 1. Sec., Dr. Chas. B. Pinkham, 135 Stockton St., San Francisco.
COLORADO: Denver, July 6. Sec., Dr. David A. Strickler, 612 Empire Bldg., Denver.
CONNECTICUT: Hartford, July 6-7. Sec., Regular Board, Dr. Robert L. Rowley, 49 Pearl St., Hartford.
DELAWARE: Wilmington, June 15-17. Pres. Medical Council, Dr. H. W. Briggs, 1026 Jackson St., Wilmington.
FLORIDA: Eclectic Board, Jacksonville, June 18-19. Sec., Dr. G. A. Munch, 1306 Franklin St., Tampa.
FLORIDA: Regular Board, Jacksonville, June 14-15. Sec., Dr. Wm. M. Rowlett, Citizens Bank Bldg., Tampa.
GEORGIA: Atlanta, June 9-11. Sec., Dr. C. T. Nolan, Marietta.
ILLINOIS: Chicago, June 14-17. Director, Mr. Francis W. Shepardson, Springfield.
IOWA: Iowa City, June 16-18. Sec., Dr. Guilford H. Sumner, Capitol Bldg., Des Moines.
KANSAS: Topeka, June 15-16. Sec., Dr. H. A. Dykes, Lebanon.
LOUISIANA: New Orleans, June 10-12. Sec., Dr. E. W. Mahler, 141 Elk Place, New Orleans.
MAINE: Portland, July 6-7. Sec., Dr. Frank W. Searle, 140 Pine St., Portland.
MARYLAND: Baltimore, June 15. Sec., Dr. J. McP. Scott, 137 W. Washington St., Hagerstown.
MICHIGAN: Ann Arbor, June 8-10. Sec., Dr. B. D. Harrison, 504 Washington Arcade, Detroit.
MINNESOTA: Minneapolis, June 1-4. Sec., Dr. Thos. McDavitt, 539 Lowry Bldg., St. Paul.
MISSOURI: St. Louis, June 14-16. Sec., Dr. Geo. H. Jones, State House, Jefferson City.
NEBRASKA: Lincoln, June 9-11. Sec., Department of Public Welfare, Mr. H. H. Antles, Lincoln.
NEW JERSEY: Trenton, June 15-16. Sec., Dr. Alexander MacAlister, State House, Trenton.
NORTH CAROLINA: Raleigh, June 21. Sec., Dr. H. A. Royster, 423 Fayetteville St., Raleigh.
NORTH DAKOTA: Grand Forks, July 6-9. Sec., Dr. Geo. M. Williamson, 860 Belmont Ave., Grand Forks.
OHIO: Columbus, June 8-11. Sec., Dr. H. M. Platter, State House, Columbus.
OREGON: Portland, July 6. Sec., Dr. Urling C. Coe, 1208 Stevens Bldg., Portland.
PENNSYLVANIA: Philadelphia and Pittsburgh, July 6-10. Sec., Dr. Thos. E. Finnegan, State Capitol, Harrisburg.
RHODE ISLAND: Providence, July 1-2. Sec., Dr. Byron U. Richards, State House, Providence.
SOUTH CAROLINA: Columbia, June 22. Sec., Dr. A. Earle Boozer, 1806 Hampton St., Columbia.
TENNESSEE: Memphis, Nashville and Knoxville, June 11-12. Sec., Dr. A. B. Dr[illegible], 1001 Exchange Bldg., Memphis.
TEXAS: Galveston, June 22-24. Sec., Dr. Thos. J. Crowe, Trust Bldg., Dallas.
UTAH: Salt Lake City, July 5-6. Sec., Dr. G. F. Harding, 405 Templeton Bldg., Salt Lake City.
VERMONT: Burlington, June 29-July 1. Sec., Dr. W. Scott Nay, Underhill.
VIRGINIA: Richmond, June 23-25. Sec., Dr. J. W. Preston, McBain Bldg., Roanoke.
WASHINGTON: Seattle, July 6-8. Sec., Dr. Wm. M. O'Shea, 305 Old National Bank Bldg., Spokane.
WISCONSIN: Milwaukee, June 29-July 1. Sec., Dr. John M. Dodd, 220 E. Second St., Ashland.
WYOMING: Cheyenne, June 7-9. Sec., Dr. J. D. Shingle, Cheyenne.

Colorado January Examination

Dr. David A. Strickler, secretary of the Colorado State Board of Medical Examiners, reports the written examination held at Denver, Jan. 6, 1920. The examination covered 8 subjects and included 80 questions. An average of 75 per cent. was required to pass. Of the 13 candidates who took the physician's and surgeon's examination, 5, including 1 osteopath, passed and 7, including 6 osteopaths, failed. Twenty candidates were licensed by reciprocity. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Reliance Medical College	(1910)	83
Kansas City College of Medicine and Surgery	(1917)	75
Jefferson Medical College	(1915)	92
Kyoto Imperial University	(1910)	75
FAILED		
University of West Tennessee	(1918)	40

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Cooper Medical College		(1893)	Oregon
Chicago College of Medicine and Surgery		(1909)	Illinois
Rush Medical College (1910) Iowa, (1912) Nebraska		(1915)	Illinois
University of Kansas		(1917)	Wyoming
Baltimore Medical College		(1910)	Penna.
Harvard University		(1901)	Minnesota
Barnes Medical College		(1899)	Missouri
Homeopathic Medical College of Missouri		(1897)	Missouri
Kansas City Medical College		(1898)	Kansas
Missouri Medical College		(1893)	Illinois
St. Louis University		(1914)	Oklahoma
John A. Creighton Medical College		(1912)	Nebraska

Lincoln Medical College	(1899)	Nebraska
Long Island College Hospital	(1911)	New York
University of the South	(1901)	Texas
University of Tennessee	(1903)	Tennessee
Vanderbilt University	(1914)	Michigan
University of Virginia	(1902)	Dist. Colum.

Minnesota January Examination

Dr. Thomas S. McDavitt, secretary of the Minnesota State Board of Medical Examiners, reports the oral, written and practical examination held at Minneapolis, Jan. 6-8, 1920. The examination covered 15 subjects and included 80 questions. An average of 75 per cent. was required to pass. Of the 6 candidates examined, 5 passed and 1 failed. Fifteen candidates were licensed by reciprocity. Fifteen candidates, including one osteopath, were licensed on Army and Navy credentials, and one candidate was licensed on Red Cross Service. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Rush Medical College	(1919)	90
Harvard University	(1911)	93
University of Minnesota Medical School	(1917) 88, (1918)	86
Columbia University	(1917)	91
FAILED		
College of Physicians and Surgeons, Chicago	(1897)	68

College	Year Grad.	Reciprocity with
LICENSED BY RECIPROCITY		
Chicago College of Medicine and Surgery	(1913)	N. Dakota
Northwestern University	(1918, 2)	Illinois
Rush Medical College	(1914), (1916), (1919)	Illinois
Kansas Medical College	(1909)	Kansas
Johns Hopkins University	(1915)	Maryland
Detroit College of Medicine and Surgery	(1914)	Michigan
University of Nebraska	(1904) Iowa, (1918)	Nebraska
New York University	(1897)	Dist. Colum.
Pulte Medical College	(1910)	Ohio
University of Oregon	(1915)	Colorado
Memphis Hospital Medical College	(1911)	Tennessee

College	Year Grad.	Endorsement with
ENDORSEMENT OF CREDENTIALS		
Chicago College of Medicine and Surgery	(1916)	U. S. Army
College of Physicians and Surgeons, Chicago	(1910)	U. S. Army
Rush Medical College	(1911) (1912) (1914)	U. S. Army
University of Illinois	(1911) Red Cross Service (1913)	U. S. Army
	(1916)	U. S. Navy
University of Maryland	(1914), (1915)	U. S. Army
University of Michigan Medical School	(1915)	U. S. Army
Hamline University	(1906)	U. S. Army
St. Louis University	(1909)	U. S. Army
University of Pennsylvania	(1912)	U. S. Army

Oklahoma January Examination

Dr. James M. Byrum, secretary of the Oklahoma State Board of Medical Examiners, reports the written examination held at Oklahoma City, Jan. 13-14, 1920. The examination covered 12 subjects and included 100 questions. An average of 75 per cent. was required to pass. Nine candidates were examined, all of whom passed. Forty candidates, including 3 osteopaths, were licensed by reciprocity. One candidate was licensed on Navy credentials. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Emory University	(1919)	84
College of Physicians and Surgeons, Chicago (1899) 75	(1912)	88
Loyola University	(1917)	85
University of Illinois	(1917)	87
University of Maryland	(1909)	86
Medico-Chirurgical College of Philadelphia	(1916)	89
University of Texas	(1919, 2)	85

College	Year Grad.	Reciprocity with
LICENSED BY RECIPROCITY		
College of Physicians and Surgeons, Little Rock	(1910)	Arkansas
Univ. of Ark. (1907) N. Mexico (1912), (1913),	(1917)	Arkansas
Atlanta Medical College	(1914), (1916)	Georgia
College of Physicians and Surgeons, Chicago	(1917)	Arkansas
Rush Medical College	(1910)	Illinois
University Medical College of Kansas City	(1905)	Missouri
Hospital College of Medicine, Louisville	(1901)	Kansas
Tulane University (1907) Tenn., (1915) Georgia,	(1917)	Louisiana
Saginaw Valley Medical College	(1903)	Michigan
Barnes Medical College	(1905)	Missouri
Missouri Medical College	(1883, 2)	Arkansas
St. Louis University	(1911)	Missouri
Washington University	(1909), (1915)	Missouri
University of Nebraska	(1917), (1919)	Nebraska
Eclectic Medical College	(1913)	New Mexico
Western Reserve University	(1917)	Ohio
Jefferson Medical College (1916) Kansas, Mississippi		
University of Pennsylvania	(1915)	Texas
Chattanooga Medical College	(1906)	Tennessee
Memphis Hospital Medical College	(1904)	Arkansas
Vanderbilt University (1891) Tennessee,	(1912)	Georgia
Fort Worth School of Medicine	(1917)	Texas
Meharry Medical College	(1912, 2)	Tennessee
University of Texas	(1898), (1916)	Texas

College	Year Grad.	Endorsement with
ENDORSEMENT OF CREDENTIALS		
University of Maryland	(1917)	U. S. Navy

Book Notices

BODILY CHANGES IN PAIN, HUNGER, FEAR AND RAGE. An Account of Recent Researches into the Function of Emotional Excitement. By Walter B. Cannon, M.D., C.B., George Higginson Professor of Physiology in Harvard University. Cloth. Price, $3 net. Pp. 311, with illustrations New York: D. Appleton and Company, 1920.

This little volume, appearing first in 1915, and now reprinted with only slight changes, is a well written, popular account of the investigations that Dr. Cannon and his pupils have made in this field of physiology during the last twenty years. The book is of equal interest to the physiologist, the psychologist and the medical practitioner. Since it was written, our conception of the rôle of epinephrin in normal bodily functions has undergone considerable modifications, owing chiefly to the work of Dr. G. N. Stewart of Cleveland. The final chapter, on "Alternative Satisfactions for the Fighting Emotions," is an attempt to apply physiologic investigations at Harvard to the problems of social control.

AN INTRODUCTION TO GENERAL PHYSIOLOGY, WITH PRACTICAL EXERCISES. By W. M. Bayliss, M.A., D.Sc., F.R.S., Professor of General Physiology in University College, London. Cloth. Price, $2.50 net. Pp. 237. New York: Longmans Green & Co., 1919.

This little volume follows the general plan of the large book on general physiology written by this eminent physiologist a few years ago. It is essentially a new type of elementary textbook of physiology for beginners in this science, in that it deals exclusively with the chemical and physical processes in the organism, with little or no reference to anatomic structure or histologic detail. While the book is purposely elementary, medical men who graduated twenty-five or thirty years ago could peruse the first part of the volume with profit, as it presents the main advances in the application of the laws of chemistry and physics to vital phenomena that have been made during this period.

Medicolegal

Illegal Obtaining and Dispensing of Morphin Sulphate

(Trader v. United States (U. S.), 260 Fed. R. 923)

The United States Circuit Court of Appeals, Third Circuit, in affirming a judgment of conviction of defendant Trader, a physician, of violating the Harrison Narcotic Law, says that, as the defendant was not registered as a dealer in the drug and had not paid the special tax, as required by Section 1 of the act, and as he had dispensed the drug to persons without the written orders required by Section 2, and also, by means of the statutory order forms, had obtained large quantities of the drug, he was unquestionably guilty of the violations charged, unless it appeared, in the one case, that the drug was dispensed or distributed in good faith, in the course of his legitimate professional practice, and in the other case that it was acquired for use therein. The principal error assigned was the refusal of the trial judge to charge the jury, without qualification, that the act "does not limit the amount of morphin sulphate which a physician may prescribe or administer to his patients." He charged that while the law "does not in specific terms" create such a limitation, "it does provide that such drug must be prescribed in the course of his professional practice only." It is true that the act does not in specific terms state how much morphin sulphate may be prescribed or administered by a physician to his patients It does, however, exempt physicians, in the dispensing and distributing of the drugs covered by the act, from the requirements of Section 2 only in such cases as are "in the course of his professional practice only." The regulations promulgated by the commissioner of internal revenue, pursuant to the authority conferred by Section 1 of the act, provide for separate and distinct registration by dealers and physicians. Hence, if the defendant dispensed the drug in question not in the legitimate practice of his profession, he became a dealer in the drug and was required

to register as such. Therefore, whether he was a dealer depended on whether or not he was dispensing the drug in the course of his legitimate practice as a physician. Likewise, the legality of his acts in obtaining the drug by means of the statutory order forms was dependent on whether he acquired it for use "in the legitimate practice of his profession." Manifestly, therefore, so far as the issues in this case were concerned, there was in the act just such a limitation as the trial judge stated. Accordingly, the qualification which he made in the requested instruction was not only proper, but, as it seems to this court, was quite necessary in order that the jury might not be misled and confused. It was next urged that the trial judge was not justified in stating, as he did in his charge, that, while the Harrison act is a revenue measure, "its clear purpose . . . is to restrict the distribution and use of opium and its derivatives to medicinal purposes only." It is assuredly within the discretion of a trial judge, in charging a jury, to state the purpose, as he conceives it, that Congress had in passing any given act. If an erroneous statement of such a purpose may be considered reversible error in any case, the court is entirely clear that, although the Harrison act was passed pursuant to the taxing power of Congress and is clothed in the garb of a revenue act, the judge did not misconceive or misstate the broad underlying purpose which Congress had in passing it, and therefore that no harm was done the defendant by the statement in question.

Illegal Sales of Narcotic Drugs by Physicians

(Oakshette v. United States (U. S.), 260 Fed. R. 830)

The United States Circuit Court of Appeals, Fifth Circuit, in affirming a judgment of conviction of defendant Oakshette of violating the Harrison Narcotic Law, says that the indictments charged sales to have been made by him, not in pursuance of written orders, given by the purchasers, on forms prescribed by the commissioner of internal revenue. The proof showed that he was a physician and had registered with the collector of internal revenue. He was authorized to administer the prohibited drugs, without obtaining a written order, if they were administered "in the course of his professional practice," but not otherwise. The government contended that the drugs administered by him were not administered in good faith, in the course of his professional practice, but to gratify the desire or appetite of the patients or purchasers. He contended that they constituted legitimately medical treatment for his patients. The issue so made was submitted to the jury.

The contention of the defendant was that it was not within the issues presented by the indictments, since they merely charged sales illegal because not in pursuance of written orders. The only prohibitions of the statute are (1) sales by unregistered persons and (2) sales by registered persons not in pursuance of written orders. The defendant could be charged only with having made the one kind or the other. As he had registered, he was not guilty of the first. If, having registered, he made sales or dispensed the drug without obtaining a written order, he was guilty of the second kind, unless because he came within one of the excepted classes. If he administered the drug only in the course of his professional practice, he came within one of the excepted classes, and was not guilty. If, however, he administered the drug not in the course of his professional practice, then he did not bring himself within any of the excepted classes, and so came within the operation of the prohibition of Section 2, against selling or dispensing not in pursuance of a written order, and was properly charged with that offense. As a registered person he could have been charged with no other offense, since the act creates no other out of the act of selling or dispensing by registered persons. It does not make it a separate offense for a physician to administer the drug when it is not done in the course of his professional practice. His doing so merely removes him from the classes exempted from the operation of Section 2, and leaves him subject to the punishment prescribed by Section 2.

Dispensing the drug, though by a physician, if not in the course of his professional practice, is in legal effect a sale; and, being one, can be legally made only in pursuance of an order form; and the offense of doing it without one is necessarily that of selling or dispensing not in pursuance of a written order, in violation of Section 2 of the act.

The defendant complained that the evidence was insufficient to convict him. That there was evidence in the record from which the jury might well have inferred that the defendant administered the drug, not in good faith to cure his patients or alleviate their present suffering, but to satisfy their craving, as addicts, for the drug, was clear from the constant quantities over periods of as much as three months, during which the record showed it was furnished to a number of persons by the defendant. The sufficiency of his explanations as to why he failed to reduce the amounts, especially as to those he testified he was attempting to cure of the drug habit by the method of reduction, was for the jury to determine.

Liability of Physicians—Advising Local Physician

(Thornburg v. Long (N. C.), 101 S. E. R. 99)

The Supreme Court of North Carolina, in affirming a judgment of nonsuit in this action against a physician to recover alleged damages, says that the law governing the liability of a physician to his patient is well settled. While there is an implied contract that the physician or surgeon who undertakes to treat a patient will use all known and resonable means to accomplish the object for which he is called to treat the patient, and that he will attend to the patient carefully and diligently, there is no guaranty that he will cure him, or that he will not commit an error of judgment. The law implies only that he not only possesses, but that he will employ in the treatment of the case, such reasonable skill, care and diligence as are ordinarily exercised in this profession. But a physician or surgeon possessing the requisite qualifications and applying his skill and judgment with ordinary care and diligence to the diagnosis and treatment of a patient is not liable for an honest mistake or error of judgment in making or prescribing the mode of treatment, when there is ground for reasonable doubt as to the practice to be pursued.

The testimony of the plaintiff in this case tended to prove that he began suffering from a swollen arm, and, after being treated for about a week by his local physician and receiving no relief, he was sent by his family physician to the hospital of the defendant for treatment. The plaintiff told the defendant of his great suffering, and asked him to operate on him or give him some relief from his pain. The defendant examined the plaintiff at once, removed his shirt to the waist, found his arm swollen from elbow to neck, examined his back, looked over him, asked him as to his habits, private history relating to women, took blood from him for analysis, put him to bed, called on him next morning to make further examination, gave him some medicine, and told him he could not do anything until he had a report from the analysis of his blood—would not say it was tuberculosis. The defendant took some blood from the plaintiff's arm and sent it away to be tested, and the next day the plaintiff returned to his home to await the further orders of the defendant. In a few days the defendant wrote to the plaintiff's local physician that the plaintiff's blood showed the strongest positive Wassermann test, and that he had a bad case of syphilis, and nothing but heroic treatment would save his life. The plaintiff testified that he was a virtuous man and had never had sexual intercourse with any woman other than his wife, who was a woman above reproach. After he returned from the defendant's hospital, his local physician lanced his arm, and a few days thereafter it was again lanced, by another physician, and he had entirely recovered.

The question was, Did the defendant, under the facts as testified to by the plaintiff, use that skill and diligence which he was required to use, and was there evidence tending to prove the plaintiff's contention of negligence sufficient to be submitted to the jury? There was evidence, sufficient to go to the jury, that the defendant made an erroneous diagnosis when he concluded that the plaintiff suffered from the effects of syphilis, but there was not a scintilla of evidence that he

was incompetent or negligent. On the contrary, the evidence offered on behalf of the defendant indicated that he stood very high in his profession, and that in diagnosing the plaintiff's case he followed recognized and established practice. The fact that the defendant wrote to the plaintiff's local physician that the examination showed evidence of syphilitic poison was no basis for an action. It was the defendant's duty to communicate to him the conclusion he had reached. The communication was wholly privileged. The court thinks the defendant's motion for a nonsuit was properly allowed.

Competency of Evidence as to Insanity

(Davis v. Alderson (Va.), 100 S. E. R. 541)

The Supreme Court of Appeals of Virginia says, in this case wherein plaintiff Alderson sued defendant Davis for the specific performance of a contract by the latter for the purchase of a tract of land, and the defendant's defense was that when the contract was entered into he was temporarily insane, that three physicians were called as witnesses and examined as experts. None of them had seen the defendant at or near the time of the transaction, and they were not called on to testify from personal knowledge; but a question was propounded to them which ended with the inquiry, Would you regard a man in the financial condition of Mr. Davis, making the two trades and purchases above, as a man whose mind was in a proper condition and a man sane at the time or not? Their testimony was not expert testimony at all, but the mere inexpert opinions of these gentlemen, and should have been excluded.

Testimony of lay witnesses as to the sanity or insanity of a person is admissible in evidence when it appears that the witness has had sufficient opportunity, by observation, to form an opinion worth considering; but the opinion of the witness should be preceded by a statement of his opportunity for observation, and of the facts observed. The value of such testimony is dependent very largely on the character of the witness, his opportunities for observation, the facts observed, the interest, bias or prejudice of the witness, his capacity and intelligence in making and relating his observations, and other circumstances which affect the weight to be given to oral testimony generally. Usually such testimony, when general and continuous insanity is not involved, is not esteemed of much value, except so far as the opinion of the witness is justified by the data observed.

Whether the defendant's purchases were wise or foolish, if he had contractual capacity, was immaterial. If courts were permitted to pass on the wisdom or folly of contracts, or if that were a test of sanity or insanity, the business of the country would soon be involved in inextricable confusion. Allusion was made more than once to the fact that the defendant was of the great age of 62 years as affecting, in conjunction with other things, the validity of the contract; but the court will take judicial notice of the fact that men of greater age than that so far retain the confidence of the government in their mental capacity as to be placed in judicial positions where they have to pass on the validity of contracts made under identical circumstances with the case in judgment. Every one is presumed to be sane until the contrary is made to appear by him who alleges it.

The defendant was bound by his contract.

"Insane Delusion" Difficult of Accurate Definition

(Trustees of Epworth Memorial Methodist Church et al. v. Overman et al. (Ky.), 215 S. W. R. 942)

The Court of Appeals of Kentucky, in reversing a judgment that invalidated a will which was contested by the children of the testator on the sole ground that it was executed under an insane delusion as to their feelings and attitude toward him, says that an "insane delusion" that renders one incapable of making a will is difficult of accurate definition. It is much more than bias or prejudice, or any merely incorrect mental attitude. It is rather a wholly irrational state of mind on a particular subject; that is, such a mental state as is supported by no evidence whatever, and therefore purely a product of the imagination. As has been said, insane delusion should be distinguished from prejudice or error, as well as from eccentricity. It differs essentially from some rational belief, not well founded, however perversely the testator may have clung to it. An ill-founded belief, not actually insane, does not destroy testamentary capacity. And where one indulges in an aversion, however harsh, which is the conclusion of a reasoning mind, on evidence no matter how slight or inaccurate, his will cannot be on that account overturned.

Society Proceedings

COMING MEETINGS

American Assn. of Genito-Urinary Surgeons, Rochester, Minn., May 31.
American Climatological and Clin. Assn., Philadelphia, June 17-19.
American Gynecological Society, Chicago, May 24-26.
American Laryngological Association, Boston, May 27-29.
American Medico-Psychological Assn., Cleveland, O., June 1-4.
American Ophthalmological Society, Hot Springs, Va., June 15-16.
American Orthopedic Association, Toronto, Ont., June 7-10.
American Otological Society, Boston, May 31-June 1.
American Pediatric Society, Highland Pk., Ill., May 31.
American Psychopathological Assn., Cleveland, O., June 5.
Arkansas Medical Society, Eureka Springs, June 8-9.
Association of American Peroral Endoscopists, Boston, June 1.
Canadian Medical Association, Vancouver, B. C., June 22-25.
Massachusetts Medical Society, Boston, June 8-9.
Michigan State Medical Society, Kalamazoo, May 25-27.
Montana State Medical Association, Helena, July 14-15.
Nebraska State Medical Association, Omaha, May 24-26.
Nevada State Medical Association, Lake Tahoe, June 25-26.
New Jersey Medical Society, Spring Lake, June 15-17.
North Dakota State Med. Assn., Minot, June 15-16.
Ohio State Medical Association, Toledo, June 1-3.
Rhode Island Medical Society, Providence, June 3.
Southern Minnesota Medical Assn., Fairmont, Minn., June 28-29.
Western Electro-Therapeutic Association, Kansas City, Mo., May 27-28.

MEDICAL ASSOCIATION OF GEORGIA

Seventy-First Annual Session, held at Macon, May 5-7, 1920

The President, DR. E. G. JONES, Atlanta, in the Chair.

Forty-Three Gallbladder Operations

DR. R. M. HARBIN, Rome: In this series of cases there were seven men and thirty-six women. The youngest patient was 26, the oldest 77. The duration of stay in hospital was about the same for cholecystostomy as for cholecystectomy. In five cases, gallstones were unexpectedly discovered. Seventy-eight per cent. of the patients gave histories of devitalized teeth; 53 per cent. had had abscessed teeth; 31 per cent. had had tonsillitis; 50 per cent. had had rheumatism in some form; 15 per cent. had had jaundice, and 50 per cent. had had some form of septicemia.

Breast Tumors, Special Reference to So-called Cystic Mastitis

DR. C. W. ROBERTS, Atlanta: Chronic cystic mastitis bears a definite relationship to cancer of the breast, and must be considered a precancerous lesion. This disease becomes cancerous in one out of five cases observed to their final outcome. So-called cystic mastitis in patients above the age of 35, with suspicious malignant tendencies, should be treated by a radical operation of the Halstead type. In that special class of cases in younger women, unassociated with frank malignant tendencies, and when for individual reasons the patient's future would be more or less blighted by the complete operation, the conservative plan should be adopted. This disease furnishes about one third of breast lesions, discovered on routine examination.

Treatment of Cancer with Radium

DR. C. C. HARROLD, Macon: Radium is only a handmaid to surgery, and there are many cases in which it would be criminal to use radium instead of operating. Radium should not be used in cancer of the breast, except for treating recurrent nodules. It should not be used on the lip instead of doing the radical neck dissection. However, in cancer of

the lip it will do just as well as the old operation of dissecting out the growth from the lip without getting the neck glands, and with nothing like the accompanying deformity and parrot mouth occasionally seen. Radium should be used for the local growth; a few weeks later, after all local growth has been cleaned up, the radical operation on the neck should be performed. The value of radium is unquestioned in the inoperable cases of cancer of the uterus. In the treatment of early cancer of the cervix, there is no primary mortality. The patients are immediately relieved from all their symptoms, and Janeway asserts that unless the disease has already gone out into the parametrium we have a permanent cure.

Medical Aspects of Surgical Cases

DR. WILLIAM HOWARD LEWIS, Rome: There are three distinct phases in which the medical mind should be of material advantage to the surgeon: (1) in assisting to establish a diagnosis; (2) in differentiating between and evaluating the relative weights of coexistent medical and surgical conditions in a given case, and (3) in cooperating during the convalescence and ultimate restoration to health.

Mobilization Versus Immobilization

DR. THEODORE TOEPEL, Atlanta: Splints, usually of plaster of Paris, are necessary in the treatment of most fractures. As soon as possible splints are discarded. Then a mixed treatment is adopted, massage and mobilization being practiced daily after only a brief delay, the splints being applied between times. When a limb is immobilized, not only are no steps taken to restore the circulation, but a condition of total disuse is enforced, which must itself lead to further loss of vitality. Even a healthy bone tends to undergo atrophy, and that so rapidly that the bones of a child's limb which have been placed in plaster are liable to undergo spontaneous fracture after the second month. That external splints fail to restore circulation is also shown clinically by the fact that a leg still shows signs of edema when a plaster splint is removed a month or six weeks after fracture.

Gunshot Wounds of the Chest and Their Treatment

DR. T. C. DAVISON, Atlanta: In my series of more than forty cases I was impressed with the frequency of pneumothorax as a complication, and I often found one or more openings in the diaphragm, with hernia of the abdominal viscera. In those cases of chest injuries that were given the so-called expectant treatment, too often at the necropsy it was found that serious complications were present which could be ascertained only by open operation. The indications for operation are: fracture of the ribs; bleeding from the parietal wound; a sucking wound into the pleural cavity; retention of large foreign bodies within the chest; a large hemothorax which cannot be evacuated by aspiration; serious internal hemorrhage, and any wound below the sixth rib on account of possible injury to the diaphragm and abdominal viscera. The operation should be performed as soon as possible after the receipt of the wound, unless the patient is in shock. Contraindications for operation are small, clean, punctured, through-and-through wounds of the upper thorax with the absence of serious symptoms; shock, and pneumothorax of the opposite side.

The Obstetrician's Obligation

DR. GARNETT W. QUILLIAN, Atlanta: The accoucheur owes four obligations to the new-born babe: (1) proper care of the eyes; (2) proper care of the navel; (3) applying only to the male child, circumcision, except in rare cases; (4) an effort to see to it that the child is not robbed of its proper food, its mother's milk.

Utility of Influenza-Pneumonia Vaccine in Pregnancy and Postoperative Conditions

DR. MARION T. BENSON, Atlanta: During the present epidemic I had under observation and treatment forty-five pregnant women, and none of these women died when they received a preventive dose of vaccine. Ten of these women had had influenza in their homes, and found it necessary to render personal care to those who were sick; but all escaped the disease. Five others, who were constantly exposed and had to do nursing, developed mild cases without troublesome complications. Three women miscarried, but did not develop pneumonia or any other complication, and made uneventful recoveries. Three women who did not receive any influenza-pneumonia vaccine before they were infected developed pneumonia and died in an alarmingly short time.

I used Type IV influenza-pneumonia vaccine brought out by General Hospital No. 6.

Early Diagnosis as a Means of Reducing the Death Rate from Cancer

DR. J. L. CAMPBELL, Atlanta: I have selected a group of cases to show the importance of removing breast tumors during the early or precancerous stage. Fifteen were benign and thirteen were malignant tumors. Of the former patients, all are now well and strong, while only five of the latter are living; one has a recurrence and is being treated with the roentgen ray; three who have passed the five-year period are well, while I have not heard from a sixth in some months. In two of the women the tumors had been present between four and five years; in others, only a few weeks to a month or two. In all cases the principal symptom was a lump; in a few, pain was noticed during the menstrual period. In both the intracystic adenoma and the intracanalicular fibroma there had been a bloodstained discharge from the nipple before the enlargement was noticed. In eight of ten cases the diagnosis was easy, as the clinical picture was complete.

Relief of Menorrhagia and Metrorrhagia by Roentgen-Ray Treatment

DR. W. A. COLE, Savannah: Roentgen-ray therapy is now considered by many to be the method of choice in all cases of menorrhagia of the menopause in which the presence of carcinoma is definitely excluded either by the history or by a diagnostic currettement, and in those cases not presenting a large, soft myoma which is likely to undergo malignant degeneration later. It is also used in cases of menorrhagia, or metrorrhagia in young women, when there is a small mucous fibroid, when no gross pathologic condition is demonstrable, and in cases presenting a large myoma in which there is a definite surgical risk.

Spinal Anesthesia

DR. W. L. COOKE, Columbus: Spinal anesthesia may be used with absolute assurance of perfect anesthesia in any operation of any magnitude below the umbilicus. In my hands it has been an absolutely safe procedure. I have used this method of anesthesia in all kinds of operations from a case of simple hemorrhoids to a complete hysterectomy, and from a simple amputation of the leg up to a bone graft for ununited fracture of the femur. I do not know exactly how long the anesthetic effect lasts, but I have performed operations that required anywhere from fifteen minutes up to almost two hours, without the patient's experiencing any pain whatever.

Hypertrophic Stenosis of the Pylorus

DR. W. WHATLEY BATTEY, JR., Augusta: During the last few months I have operated in three cases of hypertrophic stenosis of the pylorus in infants, aged 3, 5 and 6 weeks, respectively.

I did the Rammstedt operation.

Some Diagnostic Problems of the Chest

DR. E. C. THRASH, Atlanta: Every physical examination of the chest, when the patient is really sick, should be checked up with the roentgen ray. Our latest two epidemics of influenza have frequently caused two disturbances that have been exceedingly difficult to differentiate from tuberculosis. These are the hemic infections and the endocardiac disturbances without valvular lesions. Both disturbances present practically the same symptoms as tuberculosis, and the fact that the physical signs of tuberculosis are not present does not enable one to rule out the latter disease. A

blood culture will often clear up this problem; but if it is negative, one is still confronted with a problem. A careful study of the roentgenogram and a survey of the past history of the patient will often throw light on these cases.

Local Anesthesia in Abdominal Surgery

DR. L. W. GROVE, Atlanta: I have had no hesitancy in recommending the method in well defined acute conditions or in simple drainage. I would hesitate to advise local anesthesia in obscure inflammatory masses, in which event some form of anoci-association anesthesia, preferably local anesthesia with gas-oxygen, is unquestionably the safest and surest, and is the anesthetic of choice.

Importance of Ureteral Stricture in Abdominal Diagnosis

DR. GEORGE Y. MASSENBURG, Macon: A patient sent to me for operation with a diagnosis of appendicitis had had recurrent attacks of pain in the appendical region for ten months, the attacks lasting from a few hours to several days, with a constant soreness near McBurney's point. She had some nausea with the attacks, but no vomiting. In the more severe attacks, she occasionally had some pain in the right lumbar region, and some bladder irritability. She never passed any blood in the urine. A catheterized specimen of the urine was negative. Roentgen-ray examination revealed a small shadow in the region of the lower end of the ureter. On cystoscopic examination, the bladder appeared normal. An opaque catheter in the right ureter showed the shadow to be a small stone in the ureter. With a wax bulb on the catheter, a stricture was found in the ureter at about the region of the stone. The stricture was dilated with a 4 mm. bulb. The patient had considerable pain for about twenty-four hours, but left the hospital in a few days. One month later the patient was still free from symptoms, but had not passed the calculus. She was dilated a second time, April 10, 1919. She is still free from all symptoms, but has not passed the stone.

SOUTH CAROLINA MEDICAL ASSOCIATION

Seventy-Second Annual Meeting, held in Greenville, S. C., April 20-21, 1920

The President, Dr. E. W. PRESLEY, Clover, in the Chair

Inducing Rapid Growth of Epithelium Over Areas Denuded of Skin by Use of Zinc Oxid Adhesive Plaster Applied Directly to Raw Area

DR. LINDSAY PETERS, Columbia: If the denuded area shows acute inflammation with abundant suppuration, it is dressed daily with dichloramin-T suspended in oil, making a 1 per cent. mixture. When the wound is clean, adhesive plaster is placed immediately on the wound, without the interposition of gauze or other material, the wound being completely covered either with a single piece or with overlapping straps. Dressings should be done daily. No antiseptics are used. The action of the adhesive plaster may be explained by its possible ionic effect, by the production of edema, carrying out the idea of Bier's hyperemia, by the exclusion of air, destroying aerobic bacteria, and by excess of serum bringing a new army of antibodies into play.

New Treatment of Enuresis in Children

DR. WILLIAM R. BARRON, Columbia: In so-called idiopathic enuresis, the treatment consists in emptying the bladder with a catheter under aseptic precautions, and then instilling through the catheter into the bladder 1 ounce of a 3 per cent. argyrol solution, letting some remain in the bladder for from one-half to one hour, when it is voided. This is done every day or every other day, as indicated. The strength of the argyrol is gradually increased until 10 per cent. is borne without irritation. It is not well to use strengths of argyrol that irritate, because they will not be retained and will make the child object to treatments. In boys, instead of inserting a catheter, the argyrol is injected through the urethra with a bulb syringe, washing out the urethra with plain sterile water after the argyrol is forced into the bladder.

Folliculosis Versus Trachoma in Our Schools

DR. J. W. JERVEY, Greenville: In the early stages many cases of trachoma present clinical appearances indistinguishable from follicular conjunctivitis by any diagnostic method, macroscopic or microscopic. In a few weeks or at most a few months, the essential changes characteristic of trachoma will appear if this is the disease; if they do not appear, then we are dealing with something else. No case of trachoma can be cured in the sense that all traces of it can be eliminated. What the mistaken ophthalmologist cures is folliculosis, and the profession and the public should realize this fact. And here the cure is infinitely worse than the disease. Trachoma is no respecter of age, while folliculosis occurs among schoolchildren and is an adenoid hypertrophy. When it exists, one will invariably find in the same child hypertrophied tonsils and nasopharyngeal adenoids, and refractive errors seem practically always to be present in these cases. This condition has been mistaken for trachoma by officials of the United States Public Health Service, and children have been operated on needlessly. It is important to have a well trained ophthalmologist on the state board of health.

Malignant Tumors of Male Breast: Report of Case

DR. GEORGE BENET, Columbia: Benign tumors of the male breast do not seem to differ essentially from those found in the female. My case was one of fibro-adenoma with a malignant degenerative process in a man, aged 18. He complained of a small lump in the left breast of four months' duration, which caused him no inconvenience until after a slight blow on the breast two weeks before coming under observation. The boy was somewhat feminine in appearance, and his muscular development was not that of a boy of 18. There was no glandular involvement.

The Proctoscope in General Diagnosis

DR. F. M. DURHAM, Columbia: All patients suffering from symptoms referable to the rectum that do not yield to ordinary treatment should be given a proctoscopic examination. No surgeon should operate on a patient for hemorrhoids, especially of the bleeding variety, without first giving his patient such an examination. All patients suffering from back, uterine and bladder symptoms, and all cases of intestinal indigestion and autointoxication, which are refractive to treatment and have no definite pathologic lesion, should also undergo proctoscopic examination.

The Incision of Tumors for Diagnosis

DR. KENNETH M. LYNCH, Charleston: The ordinary manipulation of a tumor in the course of examination may be the source of much more stimulation than would be an incision. If we weigh the evidence for and against and the advantages and disadvantages of submitting a specimen for microscopic examination, both to the patient and to the surgeon, I believe microscopic examinations would become of more general practice. The story of no tumor is complete without a microscopic examination, whether preoperative, at operation or postoperative, as the circumstances surrounding each case demand.

Metabolism as an Aid in Diagnosis, Prognosis and Treatment of Hyperthyroidism

DR. STUART MCGUIRE, Richmond, Va.: There has not yet been sufficient experimentation or practical experience with basal metabolism to determine its exact clinical value. Like the thermometer, it promises to be a most valuable agent; but, like the thermometer, its record must be considered together with the patient's clinical symptoms. A patient with hyperthyroidism may have a high metabolic rate and not be as seriously sick as another with a lower rate who has structural changes in the heart, liver or kidneys. The metabolic rate of the patient is a definite index of the degree of hyperthyroidism present, and therefore very valuable in making a diagnosis. The onset of hyperthyroidism is so slow that it is difficult to recognize it in its incipience; and here the metabolic rate will clearly differentiate it from hysteria, neurasthenia, tuberculosis, and other conditions with which it may be confused. Again, in the later stages,

there develop symptoms due to degeneration of the heart, liver or kidneys, and it is difficult to say how much the patient suffers from hyperthyroidism and how much from damage to the vital organs. Here also a determination of the basal metabolism will be of value, not only for diagnosis but for prognosis as well. Usually, a patient's clinical symptoms coincide with his metabolic rate; but sometimes they do not. Patients with high metabolism and moderate tachycardia are more seriously ill than those with moderate metabolic increase and a very rapid heart action. In treating a patient for hyperthyroidism, the estimation of the metabolic rate is of value first to determine the safety of the measure to be employed, and second to ascertain its efficiency.

Autointoxication

Dr. Edward H. Goodman, Philadelphia: I protest against the use of this term and the making of a diagnosis without evidence which at the present moment has not been universally accepted as unquestionable. Not every one who uses the term autointoxication understands by it what he wishes others to understand, and which in the hands of many means so many varied things. The term is a loose one loosely used.

Renal Calculus

Dr. G. T. Tyler, Greenville: This report includes five cases of kidney stone; four patients have been operated on and one patient is still under observation. All were cases of single stone in women: four were in the left kidney and one in the right. Except in one case, all the diagnoses were made and confirmed by differential urinary and roentgen-ray findings. In this case the diagnosis was appendicitis, but was disproved by obtaining a specimen of urine from the right kidney. At the time of the attack, the patient had boils over the buttocks and back; the kidney infection was probably secondary to them. Though I used the wax-tipped catheter, in only one instance was there a scratch noted on it. This was because the stone lay outside of the course of the catheter. Except in one case the stones were all removed by pyelotomy. In one case in which both kidneys were involved, the induction of adequate drainage, together with the injection of silver nitrate and mercurochrome-220 into the kidney pelvis resulted in increasing the phenolsulphonephthalein elimination from both kidneys to 25 per cent. in twenty minutes. In these cases and in three others not cited in detail, I feel that good results have been obtained only by the conservation of the kidney function and by the effort to make the patient a safe risk before undertaking operation.

Medical Certificates of Insanity

Dr. J. W. Babcock, Columbia: I wish to appeal to physicians for greater care in the making out of certificates of insanity. There is an indifference on the part of physicians which is by no means confined to South Carolina, but is common all over the country. The physician who signs a certificate of commitment without making a careful examination and going carefully into the case does a serious injustice to the patient and to himself. It is well to remember that relatives may sometimes allege that a person of whom they wish to get rid is insane when such is not the case.

Hospital Standardization in South Carolina

Dr. J. R. Young, Anderson: Last October, only 198 of our 671 hospitals of 100 or more beds could measure up fully to the minimum standard set by the American Medical Association. One year before that, only eighty-nine could qualify. We provide one hospital bed for every 1,100 of our population, while the average ratio is one bed for 486. The medical profession is responsible for any defects in the quality of hospital service. The rank and file of the profession can help in attaining state-wide improvement of hospitals by measuring the efficiency of the hospital to which they refer their patients by the yardstick of the minimum standard. If physicians will (1) become familiar with the aims of hospital standardization; (2) study closely the progress which the hospital of their choice is making, and (3) lend their full support and cooperation to it, they will aid tremendously this organized effort of hospital improvement.

Significance of Nervousness in Children

Dr. J. F. Munnerlyn, Columbia: It is becoming more and more evident that in children who have certain slight or grave defects in their nervous make-up, something in their development has not gone right. This does not mean that they are intellectually deficient, but that something has gone wrong in the realm of mental functions from which spring desires and motives. There should be some organized plan for the study and control of these early apparently trivial abnormalities. The work of psychiatric clinics in Massachusetts and New York has been most gratifying, and where this phase of health work has been instituted it is considered just as important as that which has to deal with the control of tuberculosis, venereal diseases, etc. Many unfortunate individuals, who are at present steering directly to an inevitable mental breakdown, can be helped to live happy and efficient lives.

Diagnosis of Atypical Malaria

Dr. Francis B. Johnson, Charleston: Pulmonary tuberculosis is probably more often mistaken for malaria, and malaria for tuberculosis in the Southern states, than any other disease, because of the widespread prevalence of both. Not infrequently both exist. The atypical malarial conditions are more usually associated with the chronic infections of the pernicious type, particularly those not characterized by a definite paroxysm. Among conditions that may be ascribed to malaria are found diarrhea, dysentery, various types of neurasthenia, paralysis, ulcerative stomatitis, multiple gangrene, orchitis, and many diseases of the eye—these cases have been proved by the finding of the plasmodium of malaria, and the patients have recovered under quinin treatment.

Use of Mercurochrome in Treatment of Some Urologic Conditions

Dr. T. M. Davis, Greenville: Sixty gonococcal urethritis cases in males have been treated by this drug in 2.5 per cent. strength. The treatments were controlled by frequent examinations of the smears. In almost all cases the discharge had ceased within twenty-four hours, and in all cases by the end of the third day. The average length of time to effect a cure was twenty-six days. In none of the female patients (ninety-five) treated has there been an extension of the disease to the endometrium.

The Capillary Heart

Dr. W. F. R. Phillips, Charleston: In the circulation of the blood, as generally described, the all sufficient kinetic force is the heart. Some recognition, however, is given to auxiliary kinetic factors represented in the contractions of the skeletal and splanchnic muscles and to the suction-pump action of the respiratory mechanism. A great fall in pressure takes place in transition from arteriole to capillary; a lower to a somewhat higher pressure prevails in the veins. It is obvious that other factors than the left ventricle must enter into and complete the systemic circulation. To these factors is applied the name capillary heart. Many experiments in the injection of fluids into arterioles and capillaries have convinced me that there is a maximum point of resistance in the transition from arteriole to capillary, though it cannot definitely be stated whether it is solely resident in the capillary or partly resident there and partly in the surrounding muscular tissue. Certain experiences indicate that the capillaries of different parts and organs are differently endowed with powers of resistance. That living capillaries have the power to contract, even to the extent of completely obliterating their lumen, is a well known fact; but the significance of this property in its relation to the phenomena of circulation does not seem to have attracted the attention that its possibilities seem to attach to it.

Significance and Treatment of Fever During Infancy and Childhood

Dr. J. LaBruce Ward, Columbia: It is only in rare instances that it is advisable to use antipyretics other than hydrotherapy. The physician must be guided by the general condition of the patient, rather than by the disease or the degree of fever.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

American Journal of Roentgenology, New York

March, 1920, **7**, No. 3

*Bony Changes in Feet Following Fracture of Vertebrae. L. Bryan, San Francisco.—p. 125.
Personal Experience in Military Roentgenology Overseas. L. S. Goin, Battle Creek, Mich.—p. 128.
Manufacture of Films and Plates for Use in Roentgenology. M. B. Hodgson, Rochester, N. Y.—p. 131.
Fluoroscopic Examination in Injuries to Head. M. W. Clift, Flint, Mich.—p. 137.
*Diaphragmatic Hernia. A. S. Macmillan, New York.—p. 143.
Roentgen Ray in Cancer of Uterus. H. K. Pancoast, Philadelphia. —p. 146.
Influenzal Pneumonia from a Clinical and Roentgen-Ray Study. J. Karkavy and J. H. Selby, Takoma Park, D. C.—p. 148.

Bone Changes in Feet Following Fracture of Vertebra.—Two cases are reported by Bryan. He says little attention has been given to the fact that fracture of the vertebrae is followed by sensory disturbance in the legs and feet accompanied by bony changes.

Diaphragmatic Hernia.—Among approximately 15,000 cases examined with the roentgen ray at General Hospital No. 1, three cases of diaphragmatic hernia were found. The diagnosis in each case was first made by roentgenographic examination.

Boston Medical and Surgical Journal

April 29, 1920, **182**, No. 18

Relation of Teeth to General Health. C. H. Lawrence, Boston.—p. 443.
*Milk Situation. H. Swift, Concord.—p. 447.
New Clinic: Advance Movement in Child Welfare and Race Regeneration. J. V. Haberman, New York.—p. 450.
Intestinal Obstruction: Report of Cases. E. A. Codman, Boston. —p. 451.

Milk and Tuberculosis.—It appears that the control of human tuberculosis depends to an appreciable extent on a much closer control of bovine tuberculosis. To control this menace, Swift suggests, first, to allow the farmer something nearer the true value for a condemned animal. He would then be a little more willing to help in the fight. Second to start a demand for tuberculosis-free milk. This can be done and ought to be done by education of the physician first, who in his turn will educate his patients. Some farmers have said that they would make tuberculosis-free milk if there was a market for the product and if they could receive a price that would allow them a better margin in which to stand the losses.

May 6, 1920, **182**, No. 19

Product of Urological Clinic. W. C. Quinby, Boston.—p. 469.
Social Service and Clinic. A. C. Reed, San Francisco.—p. 476.
Technic of Lumbar Puncture. L. G. Lowrey, Boston.—p. 479.
*Milk-Borne Epidemic of Typhoid and Value of Widal Reaction in Detecting Typhoid Carriers. E. B. Bigelow and G. L. Berg, Worcester, Mass.—p. 481.
*Use of Blood and Blood Serum in Treatment of Disease. C. K. Johnson, Burlington, Vt.—p. 482.

Milk-Borne Epidemic of Typhoid.—The interesting circumstances in the epidemic studied by Bigelow and Berg were: the small number of persons who developed typhoid among those who may have ingested the organism; that dairymen who are carriers, though excreting typhoid organisms for weeks and months, rarely contaminate the milk; the value of the positive Widal as an aid in the detection of carriers.

Blood and Blood Serum in Therapy.—Special attention is drawn by Johnson to the use of blood in infants with anemia and malnutrition. Infants with jaundice, delayed clotting time and a tendency to hemorrhage may be benefited greatly by the injection of blood. It may also be useful in the treatment of purpura. Hemolytic tests should be made in every case.

Journal of Immunology, Baltimore

January, 1920, **5**, No. 1

*So-Called Neisser-Wechsberg Inhibiting Phenomenon in Bactericidal Immune Sera. Th. Thjøtta, Bergen, Norway.—p. 1.
Relation of Rate of Absorption of Antigen to Production of Immunity. M. W. Cook, Providence, R. I.—p. 39.
*Meningococcidal Activity of Blood. T. Matsunami, Tokyo.—p. 51.

Neisser-Wechsberg Inhibiting Phenomenon.—The work reported on by Thjøtta may be summarized as follows: The inhibiting phenomenon of Neisser and Wechsberg is of a specific nature. It is to be found in active as well as in inactive serum. It develops during the immunization and can be found in a very high degree in dysentery immune serum. In active serum from immunized animals examined without the addition of foreign complement, the phenomenon presents itself as a complete abolition of a normal bactericidal action. The inhibition is due to antibodies that arise during the immunization or during the natural disease. These antibodies are not identical with the agglutinins, the bacteriolysins or the precipitins. They must be considered as specific antibodies, which combine with dissolved antigen to form molecular complexes, that have a marked tendency to absorb complement and to withdraw it from the bactericidal antibodies. The titer of inhibition is directly proportional to the employed dose of complement. With a small dose of the latter, smaller doses of inhibiting antibodies can be demonstrated than with a larger dose of complement. The inhibiting antibodies do not affect the bacteria themselves, nor can they be removed from the serum absorption with an emulsion of the homologous bacilli. They can be demonstrated in serums that lack any bactericidal action.

Meningococcidal Activity of Blood.—It was found by Matsunami that normal rabbit blood and serum may kill virulent normal meningococci in vitro within three hours. The meningococcidal activity in vitro of normal rabbit blood was found to be increased up to a certain limit by the intravenous injection of the living and autolyzed meningococci. After that, further immunization did not appear to increase bactericidal activity, was generally rather irregular and not infrequently even decreased meningococcidal activity of the blood. The more highly immunized rabbit's blood was found sometimes less bactericidal than that of slightly immunized rabbit's blood. The meningococcidal activity of normal rabbit's serum has been found not to be increased by artificial immunization and also to be comparable with that of defibrinated blood of an immune rabbit. The meningococcidal activity in vitro of immune rabbit's blood was found by the pipet method to be distinctly stronger than that of the serum, of defibrinated blood or of blood consisting of blood cells and serum or of citrated blood. It was suspected that at least one factor in explaining the higher meningococcidal activity in vitro of immune rabbit's blood compared with defibrinated blood, citrated blood and serum, lies in the influence of coagulation of the blood, which is permitted in the regular test as described, favoring the phagocytosis of meningococci. Matsunami maintains that a meningococcidal blood test cannot be accepted on the basis of his investigations for the purpose of measuring or determining the artificially induced immunity against meningococci.

Journal of Urology, Baltimore

February, 1920, **4**, No. 1

*Urinary Tract Purpura: A Probable Entity. A. R. Stevens and J. P. Peters, Jr.—p. 1.
*Riedel's Lobe of Liver Complicating Urologic Diagnosis. V. J. O'Conor, Boston.—p. 97.
Device for Holding Ureteral Catheters. C. S. Levy, Baltimore. —p. 107.
Renal Migration of Ureteral Calculus: Case Report. J. H. Neff, University, Va.—p. 111.

Urinary Tract Purpura.—Stevens and Peters report a group of cases that presented as a distinguishing feature a purpuric condition confined, in at least the majority of cases, entirely to the urinary tract. This condition was marked by an acute onset, temperature of an irregular type, general febrile symptoms, frequency of urination, dysuria, gross hematuria, cylindruria and a reduction of the phenolsulphonephthalein excretion. The disease, as far as it could be observed, tended to run a prolonged subacute or chronic course. Occasionally, acute relapses occurred. Pathologic examination of the lesions obtained from the bladder wall by means af a cystoscopic punch revealed submucous hemorrhages unaccom-

panied by any signs of inflammation. Suggestive vascular changes were observed in some specimens. Bacteriologic examination of blood and urine proved negative. Attempts to determine the etiology of this condition or to identify it with any known disease were unsuccessful. The authors believe the condition is sufficiently distinctive to merit consideration as a new disease.

Urologic Diagnosis Complicated by Riedel's Lobe of Liver.—O'Conor has found that Riedel's lobe offers a positive complication to the urologist in making a diagnosis even in carefully studied cases. The occurrence of this condition is sufficiently frequent to be borne in mind when determining the nature of a palpable mass in the right flank or abdomen. In the presence of acute infection in the urinary tract, the occurrence of a linguiform lobulation makes a differentiation very difficult and the apparent indications are for an immediate surgical procedure. The mass in each of O'Conor's two cases could be outlined definitely on palpation and moved slightly on respiration. The notch in the elongation gave the physical signs usually found on palpating the upper pole of a low lying or enlarged kidney. In the cases described, circumstances prevented getting ureteropyelograms on the right side. These would have served to assist in ruling out the supposition that the palpable mass was kidney. In both patients the gallbladder and surrounding structures were normal, contrary to Riedel's original conception of the etiology of the prolongation. In both individuals the structures of the elongation felt and appeared to be normal liver tissue.

Medical Record, New York

April 17, 1920, **97**, No. 16

Gynecologic Patient of General Practitioner. L. Broun, New York.—p. 635.
Balance Between Endocrines and in Each Individual Endocrine. S. W. Bandler, New York.—p. 638.
Simplified and Safer Hysterectomy. H. Crutcher, Joliet, Ill.—p. 647.
Symbolism. H. Laveson, New York.—p. 649.
*Present Status of General Anesthesia from Hospital Viewpoint. S. D. Ehrlich, New York.—p. 651.
*Sarcoma of Round Ligament. G. L. Moench, New York.—p. 652.
Clinical Indications for Enucleation of Faucial Tonsil. M. Quackenbos, New York.—p. 653.

Nurse as an Anesthetist.—Ehrlich maintains that a nurse is not fully competent to administer anesthetics. She may be trained in the mechanical processes of the administration, and may even have had a few months' instruction in physical diagnosis. But this at best can give her only a superficial experience, and does not prepare her to meet the conditions with the matured judgment which comes only with a thorough knowledge of medicine. She is no more qualified to do the work of an anesthetist than a nurse with operating room training and a superficial knowledge of anatomy and the mechanical skill which has enabled her to master the steps necessary to open an abdomen and remove an appendix, for example, would be qualified to do the work of a surgeon. The matured judgment which comes only with a general knowledge of medicine is wanting in each case. The fact that nurses administer anesthetics in a few large clinics is by no means proof that it is a good thing either for the patient or for the institution. Ehrlich believes that a hospital which entrusts work of this nature and importance to a nurse assumes a grave responsibility. Justice to the patient demands that he be served with the utmost skill, not only in the mechanical administration of the anesthetic, but in the ability to cope with any emergency which may arise during the anesthesia. If a nurse finds that she is interested in this work, she should study medicine, and so become thoroughly qualified from every point of view.

Sarcoma of Round Ligament.—In Moench's case the diagnosis was made before operation. The tumor was situated in front of the external inguinal ring. According to Frankl's nomenclature it was, therefore, a preinguinolabial growth. The tumor in toto was about the size of a grapefruit. Microscopic examination showed that the main part of the tumor consisted of a myofibroma whose connective tissue had undergone hyaline degeneration in many places. The clinical course of the case showed the extreme malignancy of the new growth. The woman died eight weeks after the operation, despite the fact that at the time of operation there had been no evidence of sarcoma present, either in the ligamentum rotundum or in the inguinal glands.

April 24, 1920, **97**, No. 17

*Problems of Boarding-Out with an Attempted Solution. H. D. Chapin, New York.—p. 677.
Weakened Foot: Its Measurement and Correction. C. P. Hutchins, Syracuse, N. Y.—p. 681.
Malignant Endocarditis. Edwin Schisler, St. Louis.—p. 690.
Advantages of Home over Institutional Care. M. C. Hill, New York.—p. 692.
*Yeasts from Human Colon. J. M. Lynch and J. W. Draper, New York.—p. 693.
*Manic Depressive Insanity and Raynaud's Disease. E. H. P. Ward, White Plains, N. Y.—p. 694.

Speedwell System for Care of Infants.—In 1902 Chapin developed what is known as the Speedwell system that represents a sustained effort so to regulate and systematize boarding out as to place its good effects at a maximum and its possible bad effects at a minimum. This has been accomplished by developing what may be called a unit system of intensive boarding out. A unit is a neighborhood that has been selected after a survey has been made to learn the general conditions of healthfulness and the number of good homes that may be available in the locality. There is then inaugurated a constant oversight, especially as to diet and hygiene, on the part of a salaried physician and nurse who are thoroughly familiar with this class of cases and competent to deal with them. The children are kept indefinitely, until digestion and assimilation have improved sufficiently to result in a permanent increase in weight and strength. Accordingly, work is continued during the whole year. In each neighborhood foster mothers are trained and they become fairly expert in this work. In comparing the results of institutional care with systematized boarding out, it will be found that both mortality and morbidity are less under the latter plan. Chapin describes a plan in operation which consists of collecting units in the city that are in constant communication with units in the surrounding villages. Thus far the Speedwell has developed three of these units.

Yeasts in Human Colon.—Feces obtained from the rectum of a patient complaining of severe headache and sciatica, and who had had tuberculosis ten years previously, when inoculated into glucose agar, yielded a profuse growth of yeast cells, associated with a diplococcus and extremely few colon bacilli. The patient had never received the yeast treatment. Later, the same organism was isolated, and also what appeared morphologically to be a different type of the same yeast. A saline suspension of a pure agar culture was injected into rats. Those injected intraperitoneally showed, scattered all over the peritoneum, many small and large rounded nodules, translucent, with centrally located whitish spots, very suggestive of a tuberculous lesion. The three rats injected subcutaneously had developed a localized, tumor-like granuloma having a general similarity to the peritoneal lesions, but no metastases were found. Intravenous injection of mice resulted in death from embolism within twenty-four hours. This study is not yet sufficiently advanced to justify any conclusions as to the relation of these yeasts to the pathologic condition. Further laboratory studies are being made.

Manic Depressive Insanity and Raynaud's Disease.—Ward suggests that manic-depressive insanity is a form of Raynaud's disease affecting the frontal region of the brain.

May 1, 1920, **97**, No. 18

*Intestinal Pathology in Functional Psychoses. H. A. Cotton, Trenton, N. J., J. W. Draper, and J. M. Lynch, New York.—p. 719.
Maxillofacial Service at A. R. C. M. Hospital No. 1, A. E. F., France. W. T. Coughlin, St. Louis.—p. 725.
Home Versus Hospital Care of Cases of Influenza. L. E. Holt, New York.—p. 731.
Polycystic Kidney of Atypical Character. L. Broun, New York.—p. 735.
Does Community Responsibility End When Sanatorium Treatment has Been Given? R. C. Kirkwood, Prescott, Ariz.—p. 738.

Intestinal Pathology in Functional Psychoses.—Cotton and his associates have been able to restore 270 patients out of a total of 410. By reexamining the remaining ones they were able to find local foci which had been overlooked and by January, 1920, this number had been reduced to 100. In

other words, 75 per cent. of this group, or 310, when the local foci of infection found in the teeth, tonsils, stomach, and cervix were eliminated, were able to be discharged and returned to their respective homes. The remaining 25 per cent. apparently did not react to the treatment and remained unimproved. The object of the investigation, of which this is a preliminary report, was to search further for possible sources of infection, mainly in the lower intestinal tract. This group suggested terminal ileac and colonic trouble because of frequent "bilious attacks" during youth; habitual constipation, sometimes alternating with diarrhea; intermittent attacks of abdominal pain, and, not infrequently, a history given by the mother of intestinal disturbances beginning in early infancy. From an experience with these cases, the authors were convinced that all patients who showed any tendency toward chronicity, or who did not improve under the routine treatment directed toward the removal of infection in the teeth, tonsils, stomach and cervix, were cases in which a thorough investigation of the lower intestinal tract was indicated with a view to surgical intervention. A detailed report is made showing how many patients recovered, how many were improved and how many were benefited.

Modern Hospital, Chicago

April, 1920, **14**, No. 4

Henry Ford Hospital in Time of War: U. S. Army General Hospital No. 36. A. T. Cooper, U. S. Army.—p. 259.
Henry Ford Hospital in Time of Peace. D. D. Martin, Detroit.—p. 266.
Purpose and Methods of Air Control in Hospitals. E. Huntington, New Haven, Conn.—p. 271.
Training of Hospital Superintendents. S. S. Goldwater, New York.—p. 275.
Gardening as Occupation for Tuberculous. J. I. Pinkney, Wallum Lake, R. I.—p. 277.
Prevention of Infections in Hospitals. D. M. Lewis, New Haven, Conn.—p. 282.
The Doll Eternal. M. H. Barker, Worcester, Mass.—p. 284.
Rural Hospital Organization. J. W. Pettit, Ottawa, Ill.—p. 287.
Hospital Standardization in Woman's Hospital in New York State. G. G. Ward, New York.—p. 289.

New York Medical Journal

April 10, 1920, **111**, No. 15

*Psychopathies and Neuropathies of Cardiovascular Diseases. T. E. Satterthwaite, New York.—p. 617.
What Fears and States of Anxiety Mean to the Gynecologist. S. W. Bandler, New York.—p. 619.
Heart Disease in Adults. L. I. Dublin, New York.—p. 622.
Cardiospasm From Medical Viewpoint. E. A. Aronson, New York.—p. 624.
Hyperchlorhydria. R. H. Rose, New York.—p. 626.
Upper Abdominal Disease. M. Behrend, Philadelphia.—p. 629.
Interest of State in Health of Its Citizens. W. A. Groat, Syracuse, N. Y.—p. 631.
Is Endemic Goiter a Water Borne Disease? J. C. O'Day, Honolulu.—p. 634.

Arrhythmias and Psychopathic States in Cardiovascular Disease.—One hundred histories of cardiovascular patients were analyzed by Satterthwaite to discover the interrelation as to frequency between the arrhythmias and the psychopathic states in cardiovascular diseases. The results were as follows: With arrhythmias, taking them as predominating features in these cardiovascular cases, of the first fifty the following abnormalities were noted in seven: morbid apprehension, one; depression, four; defective mentality, two; total, seven, or 14 per cent. Of the second fifty, depression was noted in three. Total in the 100 cases: Psychopathies in ten. The range was from 6 to 14 per cent. Without arrhythmia: Of the first fifty cases the following abnormalities were noted in ten: morbid apprehension, four; depression, two; neurasthenia, three; hyperexcitability, one. Of the second fifty cases the following abnormalities were noted in ten as follows: depression, six; melancholia, two; hysteria, one; defective mentality, one. Total of arrhythmias without psychopathies, 20 per cent., as against 10 per cent. of arrhythmias with psychopathies. In the same series with respect to tachycardias, 6 per cent. were associated with psychopathies, while in 11 per cent. of the cases there were no psychopathies. Evidently, then, there is no reason to believe that either arrhythmias or tachycardias are etiologic factors of any great moment in the psychopathies. On the other hand, the reports of the Manhattan Hospital for the Insane show that in the psychopathic cases cardiovascular disease was present in about one third of the psychopathic patients.

In Satterthwaite's 100 cases the neuropathies were represented in 33 per cent. Some of them resulted from direct action of the heart or blood vessels, some from reflex causes of varying character. Satterthwaite concludes, however, that arrhythmias are not active factors in causing psychopathies; tachycardias even less so. The incidence of cardiovascular disease in causing psychopathies in general, and in being contributing causes of death in them is from 32 to 35 per cent. On the other hand, senile psychoses may be associated in a similar manner with cardiovascular disease in 77 per cent.; psychoses with cerebral arteriosclerosis in 80 per cent. of the cases. With respect to the incidence of such neuropathies as migraine, anginoid attacks, neuralgias, pareses, or paralyses and tremors, Satterthwaite's figures put it at 33 per cent. Most of such neuropathies, however, are either incidental or accidental associates of the cardiac or vascular diseases.

April 17, 1920, **111**, No. 16

*Dental Infection in Causation of Nervous and Mental Disease. C. K. Mills, Philadelphia.—p. 661.
Present Status of Oral Sepsis in Relation to Medical Diseases. J. M. Anders, Philadelphia.—p. 665.
Dental Therapeutics Based on Clinical and Roentgen Ray Investigations. W. M. Fine, Philadelphia.—p. 668.
*Relation of Focal Infection to Mental Diseases. H. A. Cotton, Trenton, N. J.—p. 672.
Major Surgery of Maxillary Bone Through Oral Orifice. S. L. McCurdy, Pittsburgh.—p. 677.
Survey of Dental Infections. M. Diamond, New York.—p. 687.
Mouth Sepsis. L. R. Cahn, New York.—p. 691.

Dental Infection as Cause of Mental and Nervous Diseases.—Mills states that a score or two of cases have passed through his hands or have come to his knowledge in which important nervous and mental diseases have been attributed to dental infection. In these, with the united support of physicians, roentgenologists and dental surgeons, the teeth in small or large numbers have been removed with results not only unsatisfactory but often so harmful as to impress Mills with the futility, if not the criminality of the procedure. Some of the diseases which came under his observation in connection with the question of dental infection are dementia praecox, manic depressive insanity, epilepsy, neurasthenia, hysteria and psychasthenia. The teeth in these cases were freely sacrificed, without a single result of convincing value.

Focal Infection and Mental Diseases.—Cotton believes that it can be shown by clinical evidence that certain types of mental diseases are caused by toxemia resulting from focal infection and that clearing up these foci of infection results in the recovery of the patient. He claims to have confirmation of this belief from the pathologic and bacteriologic studies made after death, and says he has yet to find a single case with a functional psychosis without accompanying infection. He discusses particularly dental infections, and the influence of unerupted third molars, and cites briefly a number of illustrative cases.

April 24, 1920, **111**, No. 17

*Incidence of Malignancy in Diseases of Gallbladder J. F. Erdmann, New York.—p. 705.
Drainage and Mercury Ion in Cystic Goitre. G. B. Massey, Philadelphia.—p. 707.
Diffuse Vascular Goiters. J. C. O'Day, Honolulu.—p. 708.
Surgery in Chronic Diarrhea and Local Anesthesia in Anorectal Operations. S. G. Gant, New York.—p. 709.
Scope and Limitations of Local Anesthesia in Inguinal Hernia Operations. A. S. Morrow, New York.—p. 710.
Industrial Inguinal Hernia. A. E. Seltenings, New York.—p. 713.
Relation of Rectal Disturbances to Other Pelvic Disease. C. J. Drueck, Chicago.—p. 717.
Case of Simple Hypertrophy of Prostate. John F. X. Jones.—p. 720.
Relation of Focal Infection to Mental Diseases. H. A. Cotton, Trenton, N. Y.—p. 721.

May 1, 1920, **111**, No. 18

Obligations of Medicine in Relation to General Education. W. C. Braisted, Washington, D. C.—p. 749.
Lethargic Encephalitis. J. H. W. Rhein, Philadelphia.—p. 758.
Demonstration of Reconstruction Section of Defects of Hearing and Speech. C. W. Richardson, Washington, D. C.—p. 763.
Physiologic Therapy in Influenza. A. C. Geyser, New York.—p. 767.
Aftertreatment of Fractures. W. T. Johnson, Philadelphia.—p. 769.
Relation of Focal Infection to Mental Diseases. H. A. Cotton, Trenton, N. J.—p. 770. Concluded.
Eye in General Practice. G. D. Wolf, New York.—p. 775.

Incidence of Malignant Disease of Gallbladder.—During the first six months of 1918, Erdmann observed nine carcinomatous gallbladders out of sixty-eight operations on the gallbladder. During the second half of 1918, three cases among sixty-three operative cases were noted. The last half of 1917 gave but one malignancy in forty-seven operations on the gallbladder. In thirteen operative cases of general abdominal carcinomatosis, in which the primary focus could not be demonstrated positively the point of greatest involvement was in the neighborhood of the gallbladder. In a total of 1,903 patients operated on, malignant disease of all kinds, excluding the lip epithelioma, was found 285 times. Fifteen of these were of the gallbladder; forty-three of the stomach; sixty-seven of the breast; cecum, twelve; colon and sigmoid, twenty-eight; rectum and rectosigmoid, twenty-nine; not specifically classified, seventy-nine. This group includes the uterus, kidney, larynx, tongue, liver, thyroid and other organs. The ages of the gallbladder patients varied from 42 to 67. The patients were all females.

Philippine Journal of Science, Manila

November, 1919, **15**, No. 5

Fruit Flies of Genus Dacus Sensu Latiore (Diptera) from Philippine Islands. M. Bezzi.—p. 411.
Melasidae Nouveaux (Coléoptères) Récoltés par C. F. Baker. E. Fleutiaux.—p. 445.
*Abnormalities of Vertebral Artery. M. Canizares.—p. 451.
*Rancidity of Philippine Coconut Oil. G. A. Perkins.—p. 463.
Genus Gordonia in Philippine Islands. I. H. Burkill.—p. 475.
Higher Basidiomycetes from Philippines and Their Hosts. O. A. Reinking.—p. 479.

Abnormalities of Vertebral Artery.—Two of the forty cases examined by Canizares showed abnormalities in origin of the vertebral artery; and fifteen, in point of entrance to the foramen transversarium. The findings confirm those of Bean and Thane with regard to the greater frequency of abnormalities of origin of the vertebral artery on the left side. Cases of unilateral variations in the point of entrance were almost twice as numerous as the bilateral ones.

Causes of Rancidity of Coconut Oil.—Two-year storage tests were made by Perkins on thirty samples of edible coconut oil. The results were in general agreement with the accepted views of rancidity and its causes. The action of light was found to be a powerful, but not necessary, factor in the production of rancidity. Enzymes from the fresh coconut meat had some effect on the keeping qualities of the oil, but sterilization was of doubtful benefit. An oil of low initial acidity remained sweet during two years' exposure to air and light. The measurement of rancidity is discussed briefly.

December, 1919, **15**, No. 6

Cambellosphaera, New Genus of Volvocaceae. W. R. Shaw.—p. 493.
Some Malayan Delphacidae (Homoptera). F. Muir.—p. 521.
Nesting Place of Micropus Subfurcatus in Mindoro. D. C. Worcester.—p. 533.
Method for Labeling Slides Used in Routine Stool Examinations (Use of Paper Clip). F. G. Haughwout.—p. 535.
Additions to Flora of Guam. E. D. Merrill.—p. 539.
Coleoptera Fauna of Philippines. W. Schultze.—p. 545.
*Case of Acute Mania Associated with Plasmodium Vivax Infection. F. G. Haughwout, P. T. Lantin and R. Fernandez.—p. 563.

Plasmodium Vivax Infection in Acute Mania.—In the case cited by Haughwout and his associates, infection with *Plasmodium vivax* was associated with cerebral symptoms and death. Parasites were present in the peripheral circulation in small numbers only, and the temperature of the patient at no time rose higher than 39 C., that point being reached a few hours before death. Prior to that time the temperature did not rise above 38 C., this elevation coming several days after the onset of an acute mania. The patient was one of a series of cases that was being experimentally treated with roentgen rays for splenomegaly of malarial origin. He received only one irradiation, and that eight days before the development of the mental disturbance which ran its course and terminated in death eight days following its onset. At no time did the patient show any indication of injury that it seemed possible to trace to the roentgen rays, and the necropsy failed to reveal any such evidence. Microscopic examinations of the feces revealed an infection with *Ancylostoma duodenale*. The urine was normal. *Plasmodium vivax* was found in the blood later. On the day of the development of the first mental symptoms an unmistakable trophozoite of *Plasmodium vivax* was found in the blood. The number of parasites in the peripheral blood increased somewhat until from four to six could be counted in 100 oil immersion fields. All were characteristic trophozoites of *Plasmodium vivax*. The patient, who had been receiving iron, quinin, and strychnin up to the time his mania developed, was put on intramuscular injections of quinin and urea, but he failed to show the slightest beneficial effects from them, except for the disappearance of the parasites from the peripheral blood. Twenty-four hours before death epinephrin was administered in the hope of forcing the parasites out of the spleen and into the circulation, but without success. The day before death, the differential leukocyte count showed 78 per cent. polymorphonuclear neutrophils, 7 per cent. lymphocytes, 14 per cent. large mononuclear leukocytes, and 1 per cent. eosinophils. The patient gave no history of previous attacks of mania, and the necropsy failed to disclose any evidence of syphilis. No Wassermann test was made.

FOREIGN

Titles marked with an asterisk (*) are abstracted below.

Archives of Radiology and Electrotherapy, London

March, 1920, **24**, No. 10

Malignancy. M. Roberts.—p. 308.
Value of Combined Treatment, with Special Reference to Surgery, Electricity and Roentgen-Rays. F. Hernaman-Johnson.—p. 325.

British Medical Journal, London

March 27, 1920, **1**, No. 3091

Abdominal Emergencies. R. Morison.—p. 425.
*Association of Aortic Endocarditis and Aortitis. J. E. MacIlwaine.—p. 428.
*Treatment of Cerebrospinal Fever by Monotypical Serum. W. T. Munro.—p. 430.
*Association of Lethargy with Influenza Bacillus. W. M. Crofton.—p. 431.
*Appendicitis Without Protective Stiffening of Abdominal Wall. J. D. Malcolm.—p. 432.
Artificial Pneumothorax. D. C. Coley.—p. 432.
Dermatitis Artefacta in the Army. H. Davis.—p. 433.
*Treatment of Gonorrhea in Women. R. S. Foss.—p. 434.
*Cultivation of Actinomyces. M. H. Gordon.—p. 435.
Case of Malignant Endocarditis. J. A. Nixon.—p. 435.
*Acute Edema of Lungs. H. H. Brown.—p. 435.
Novarsenobillon and Mercury Intravenously. R. Johnson.—p. 436.
Ectopic Ovarian Cyst. J. W. Thomson.—p. 437.

Aortic Endocarditis and Aortitis.—MacIlwaine describes two specimens from two men who both exhibited the classical clinical appearance of aortic regurgitation. The first man died through the rupture of an acute aortic ulcer into the trachea, while the second died after a period of cardiac incompetence which lasted for a considerable time. These two cases occurred in a series of twelve pensioners in hospital who suffered from aortic endocarditis with aortic reflux.

Serotherapy of Cerebrospinal Fever.—Munro used a pooled serum containing 50 per cent. of antibodies to Type 2, and monotypical serum was used after the type was determined. Typing of the cases as they came showed something like 40 per cent. to be Type 1, 42 per cent. to be Type 2, 16 per cent. to be Type 3, and 2 per cent. to be Type 4. To add antibodies of Type 3 and Type 4 to such a pooled serum would reduce its value by from 50 to 82 per cent. of the total cases. Twelve consecutive cases of cerebrospinal fever have come to Munro's notice and no patient has died where it was possible to treat by monotypical serum.

Association of Lethargy and Influenza Bacillus.—Crofton records the histories of four patients treated with pure influenza antigen with good success. For example, in one case, on the chance that the infection might be caused by the influenza bacillus (the case occurred during the epidemic), the patient was given subcutaneously 2½ million pure influenza antigen. The improvement was marked at the end of twelve hours. Thirty-six hours later he was given 5 million, and forty-eight hours later 7½ million. After this he had

complete control of his functions and he was no longer lethargic, although his memory was still defective. He still had difficulty in reading, and his temperature was not quite normal—99 F. He then received 10 million in the morning, forty-eight hours after the last dose; that evening his lethargic symptoms returned in full intensity, although there was no further rise in temperature. His mind did not become normal again in two days. He made a rapid convalescence, but could not read for any length of time or study for some months.

Appendicitis Without Rigidity of Abdominal Muscles.—In two cases seen by Malcolm this sign was absent, and, therefore, he did not regard the cases as being appendicitis. In one case, when the abdomen was opened, the appendix, except about one-half inch at its base, was firmly adherent in a peritoneal pouch behind the cecum. It was removed and recovery was uncomplicated. This patient had her first attack of appendicitis in childhood. The absence of protective contraction of the muscles was due to the position of the appendix and to the fact that a spreading peritonitis was prevented by the adhesions, which had long existed.

Treatment of Gonorrhea in Women.—In these cases Foss makes use of methylene blue as a bactericidal agent, partly for its great affinity for the gonococcus and partly because the anilins are absorbed by mucous membranes and even by squamous epithelium: methylene blue, 1 gm.; glycerin, 25 c.c; water, ad 100 c.c.. In acute and chronic cases the cervix is swabbed with a saturated solution of sodium bicarbonate in order to remove mucus and discharge. A gauze plug, 12 inches square, is dipped for half its length in the solution; this end is packed tightly against the cervix, the rest lightly in the vagina. The plug is removed after twenty-four hours. This is carried out for five days and then for two days dry plugs are used. This rotation is continued as long as the discharge occurs. There are two contraindications for the use of this method: pregnancy and the puerperal state. General treatment is carried out on the usual lines. Urinary antiseptics and gonococcal vaccine are given as indicated.

Cultivation of Actinomyces.—According to Gordon, the actinomyces fungus can readily be cultivated in ordinary nutrient broth to which a few drops of fresh human blood have been added. It is advisable to sow the material in two broths, one of which is covered by a layer of oil 1 cm. deep. After incubation for a few days at 37 C., the actinomyces fungus can be seen growing at the foot of the tube in small white masses like little puffballs. As a rule, growth occurs first in the broth covered with oil, but when other bacteria are present the actinomyces may come up first in the aerobic tube. The practical advantage of getting a growth is that a vaccine can then be prepared. In two cases in which a vaccine of the homologous organism was employed improvement resulted. In the majority of the cases, however, vaccine treatment was not attempted, as secondary infections were present and the disease was too far advanced. Vaccination with a stock actinomyces vaccine is, in Gordon's experience, useless; it seems essential to employ the actual strain infecting the patient.

Acute Edema of Lung.—Brown claims that this condition is allied to angioneurotic edema and is caused by a sudden and temporary dilation of the left ventricle, including the auriculoventricular orifice and consequent acute regurgitation and engorgement of the pulmonary capillaries. It is generally associated with high arterial tension and valvular disease.

April 3, 1920, **1**, No. 3092

Diagnosis of Disease of Pancreas. A. E. Garrod.—p. 459.
Influenza Among the Lapps. A. H. Macklin.—p. 465.
*Analysis of Early Cases of Beriberi. H. H. Hepburn.—p. 466.
Lesson of the War; Suppurative Middle-Ear Disease. H. Smurthwaite.—p. 467.
*Strangulated Umbilical Hernia. C. M. Kennedy.—p. 468.
Herpes Zoster and Chickenpox. A. I. Cooke.—p. 468.
Acute Edema of Lungs. C. Musgrave.—p. 468.

Chronology of Beriberi Symptoms.—Hepburn undertook to analyze the early manifestations of beriberi, with a view of establishing the correct chronological order of the early signs and symptoms. Data were compiled from over 300 examinations of 100 cases. All patients were adult Siamese males, and each one was thoroughly examined at least twice. The first symptom or sign to be noted by the patient was invariably one of the three following: (*a*) edema of feet and legs (50 per cent.); (*b*) numbness or anesthesia of feet (43 per cent.); and (*c*) epigastric fullness and distress (7 per cent.). In every case the edema appeared first in the feet, then in the legs, and then in the hands. Appreciable swelling of the hands was seldom seen in these early cases. Practically all patients complained of more or less general weakness. Several patients stated that swelling of the feet had come and gone before the onset of anesthesia. Cardiac enlargement was found at the first examination in only 15 per cent. of cases. Subsequent enlargement occurred in four additional cases in spite of treatment. The treatment adopted was physical rest, with a diet rich in antiberiberi vitamins, polished rice being rigidly excluded. Further treatment was largely symptomatic. A soft mitral systolic murmur was heard at the first examination in twenty cases. Cardiac arrhythmia was noted in five of these early cases.

Strangulated Umbilical Hernia.—A successful resection of a gangrenous ileum is reported by Kennedy. The patient had an umbilical hernia.

April 10, 1920, **1**, No. 3093

Soldier's Heart and War Neurosis: A Study in Symptomatology. J. Mackenzie.—p. 491.
Prognosis and Treatment of Chronic Nephritis. J. O. Symes.—p. 494.
*Operative Treatment of Ulcerative Colitis. P. Lockhart-Mummery.—p. 497.
*A Familial Form of Acoustic Nerve Tumor. E. Ward.—p. 496.
*Fibroids Complicating Pregnancy; Hysterectomy: Recovery. R. de Stawell.—p. 498.
Case of Cervical Caries Simulating Cerebellar Tumor. R. R. Armstrong.—p. 499.

Treatment of Ulcerative Colitis.—The best treatment of this condition, Lockhart-Mummery says is by frequent washing through with saline solution after an appendicostomy opening has been established. The operation should be performed as soon as a diagnosis has been made and not left as a last resort, although it may sometimes succeed even then. The diagnosis should always be confirmed by sigmoidoscopy.

Acoustic Nerve Tumor.—In the cases cited by Ward, the disease was present in members of three generations. Full details are given.

Fibroids Complicating Pregnancy.—Stawell's patient was 4½ months pregnant. Troublesome vomiting for two days, constipation and sharp abdominal pain led to operation. Subtotal hysterectomy was performed. On section the ordinary appearance of myoma was seen, no "red degeneration" being observed. The patient made an uninterrupted recovery.

Lancet, London

April 10, 1920, **1**, No. 5041

*Abdominal Emergencies in Which Operative Interference is Either Contra-Indicated or Restricted. C. F. M. Saint.—p. 795.
Nose, Throat and Ear Disease Among Aviation Candidates. D. Ranken.—p. 800.
*Delayed Arsenical Poisoning. G. S. Strathy, C. H. V. Smith and B. Hannah.—p. 802.
*After-History of Five Hundred Consecutive Tuberculosis Dispensary Cases. F. G. Collins.—p. 807.
*Unusual Cases of Intestinal Obstruction. J. A. C. Forsyth.—p. 808.
*Combined Aortic and Mitral Regurgitation. W. Gordon.—p. 811.
Plating of Simple Fractures. F. D. Saner.—p. 812.
Extraction of a Sewing Needle from the Heart. Z. Cope.—p. 812.
A Dicephalous Monster. M. Z. Shafel.—p. 814.
A Case of Hypospadias Perinealis. S. Chelliah.—p. 814.
Experimental Medicine and Venereal Diseases. W. F. Snow.—p. 830.

Abdominal Emergencies.—Saint emphasizes that all surgical emergencies should be treated in a properly equipped hospital, and every patient with a more than ordinary abdominal illness should be sent to such a hospital at once for observation and, if necessary, operation.

Delayed Arsenical Poisoning Following Use of Arsphenamin.—Fifty-eight cases of delayed arsenical poisoning following the use of arsphenamin preparations are reported by Strathy and his associates. Eight of these were fatal, being the first of the series to come under observation. The remaining fifty patients made a slow but otherwise

satisfactory convalescence. The greatest number of doses of arsphenamin given in the fatal cases was eleven, the least four. The greatest amount administered, where it was possible to obtain records, was 6.95 gm., the least amount 2.2 gm. The average time of onset of symptoms after the last dose was forty-one days, the longest interval forty-eight days, the shortest eighteen days. The symptoms in every case were similar. The jaundice on onset was rapidly followed by nausea, epigastric pain, stupor, hematemesis, delirium and death. Four of the patients were wildly delirious. In all cases tested the urine contained bile, and in nearly all cases albumin as well. The blood picture was not characteristic. The hemoglobin and red cells were not much reduced. The leukocytes varied in number from 14,000 to 34,000 per cubic millimeter, and the polymorphonuclear leukocytes from 50 to 80 per cent. The greatest number of doses of arsphenamin given in the nonfatal cases was fourteen, the least two. The average time of onset of symptoms was forty-five days, the longest interval 180 days, the shortest three days. Thirty-nine of the patients were admitted for jaundice, eight for dermatitis, two for nephritis, and one for general debility. Jaundice followed dermatitis in one patient, and two other cases of dermatitis were followed by peripheral neuritis. Coated tongue, poor appetite, epigastric distress, abdominal distension, headache, general malaise, and loss of weight were noted throughout the group. Albuminuria was present in twenty-eight cases, bile salts in thirty-five cases, increased urobilin and urobilinogen in sixteen cases, leucin and tyrosin were never found. Jaundice was present in all of the fatal group and thirty-nine of the nonfatal group.

After-History of Tuberculosis Patients.—The points on which Collins lays emphasis are: That pulmonary tuberculosis may be cured if treated in its early stages. It is only the early case that derives any permanent benefit from sanatorium treatment (with rare exceptions); hence the futility of clogging the sanatoriums with the more advanced type of case. Much more strenuous preventive measures should be adopted—e. g., additional suitable open air schools and institutions for very advanced cases. There is a sad lack of suitable institutions for the tuberculous child.

Intestinal Obstruction.—The cases reported by Forsyth are: acute angulation at the hepatic flexure from pericolitis; rupture of the teniae coli of the cecum; polyp of the ileum accompanied by chronic intussusception; acute intestinal obstruction from traction diverticulum of the ileum; strangulation of a loop of ileum by an adherent appendix epiploica of the sigmoid.

Combined Aortic and Mitral Regurgitation.—The most outstanding feature in Gordon's case was its duration—thirty years. Points to which attention is drawn are: the case was uncomplicatedly rheumatic, dating from a single attack of acute rheumatism at 22; the patient was otherwise healthy, with no lung or kidney complications, for the most part her work was free from physical strain; she successfully avoided further rheumatism; the degree of aortic regurgitation was probably slight for a good many years, since "water-hammer" pulse and pulsation in the neck were absent for that time (remembering, however, the influence of coincident mitral regurgitation in modifying the pulse); precordial pain, palpitation and dyspnea on exertion, with occasional faintness, were present almost throughout; so long as eleven years before her death the apex beat, in the erect position, was already in the sixth space, and 1 inch outside the left mammary line.

Medical Journal of Australia, Sydney

Feb. 28, 1920, **1**, No. 9

*Iritis. F. A. Pockley.—p. 185.
Case of Neuromuscular Atrophy of Charcot-Marie-Tooth Type. A. Watkins.—p. 189.
Case of Superacute Pulmonary Edema. H. L. Kesteven.—p. 190.
Case of Purpura Hemorrhagica. E. A. Elliott.—p. 191.
Labor Complicated by Hydrocephalus. E. B. Moore.—p. 191.

Dental Infection as Cause of Iritis.—Pockley claims that in over thirty years' practice as chief of the ophthalmic department of the largest general hospital in Australia and a considerable private practice and, though of late years he has been on the lookout for dental troubles and other focal infections as a cause, and has got advice and treatment in all doubtful cases from dentists and physicians, he has rarely, if ever, met with a case in which he could satisfy himself that the teeth were the cause of iritis. Excluding syphilitic, gonorrheal, tubercular, sympathetic and a few other cases of iritis, for which a probable cause or association can be found, his experience is that most, in fact nearly all the patients showed benefit or cure by the proper use of salicylates combined with appropriate local ocular treatment. Operation may, of course, be required in old-standing or recurring cases.

March 6, 1920, **1**, No. 10

Pathology of Influenza in France. S. W. Patterson.—p. 207.
Medical Education. E. A. Falkner.—p. 210.
Mastoid Disease with Cholesteatoma Complicated by a Cerebral Abscess. R. G. Brown.—p. 212.
Irreducible Intussusception in Children: Successful Resection, with Lateral Anastomosis. N. J. Dunlop.—p. 213.

March 13, 1920, **1**, No. 11

Method of Suture. A. C. F. Halford.—p. 229.
Chronic Disease and its Association with Focal Sepsis. S. Perry.—p. 229.
Tuberculosis in Animals. J. B. Cleland.—p. 233.
*Case of Malignant (Carcinomatous) Pericarditis. J. B. Cleland and A. Palmer.—p. 233.
Case of Jugular Phlebitis, Sinus Thrombosis, Ulcerative Endocarditis. W. S. Laurie.—p. 234.
Cesarean Section for Contraction Ring. G. A. Hagenauer.—p. 234.

Carcinomatous Pericarditis.—A man, aged 49 years, was found dead in bed. He had had a swelling behind the right angle of his jaw, which had caused him a good deal of pain, but for which he had not consulted any doctor. At the post-mortem examination, a hard swelling was noticed in the region of the right parotid gland. It was not further examined. The pericardial sac was distended, with a large quantity of bloodstained fluid, a chronic pericarditis being present. The left lung was adherent throughout. The gastric veins were prominent, the liver had the appearance of nutmeg and the kidneys showed advanced chronic interstitial nephritis. Death was attributed to chronic interstitial nephritis and chronic pericarditis. On macroscopic examination the surface of the heart showed a slight fibrous pericarditis, while in the neighborhood of the auricles were discrete, minute, nodular projections. On section, the pericardial surface of the heart showed here and there narrow, whitish, pencil-like thickenings. When microscopic sections were cut, Cleland and Palmer found among granulation tissue in places an extensive infiltration by deposits of carcinoma cells in a reticulum.

March 20, 1920, **1**, No. 12

*Toxemia in Epilepsy. P. Lalor and G. Haddow.—p. 251.
Treatment of Chorea. G. H. Burnell.—p. 260.
Hospital Standardization.—p. 263.

March 27, 1920, **1**, No. 13

Educational Number.

Relation Between Brain and Liver in Epilepsy.—The records of postmortem examinations of twenty-five cases of epilepsy, as far as the liver, etc., is concerned are given by Lalor and Haddow. The summary of their observations is that the brain-liver ratio is 35:33. The normal ratio was brain to liver, 12:15, so that the conditions are entirely reversed in the epileptic condition. The percentage in which the weights of the brain exceed those of the liver was 80 in the twenty-five cases examined. In 24 per cent. of cases status epilepticus was found and associated with this condition was toughness and congestion, indicating previous chronic irritation and present acute inflammation in 30 per cent. of these cases. There were signs of disease of the gallbladder and possibly of chronic intoxication from this source. In 8 per cent. of cases the mesenteric glands were enlarged, indicating some chronic intestinal toxemia of fairly long duration. In 20 per cent. of cases there was definite trouble in the gallbladder tract. In 40 per cent. of cases there was evidence of chronic hepatic irritation, indicative of a continuous and slow toxin, displayed by fibrosis or toxic or fatty changes. In 8 per cent. of cases there is distinct evidence of a chronic intestinal intoxication, which might in all probability be obviated by treatment.

Bulletin de l'Académie de Médecine, Paris

Feb. 24, 1920, **83**, No. 8

*Experimental Hematology. Normet.—p. 163.
*Quadruple Birth. Pinard.—p. 169.
*Hammer Percussion Locates Painful Points. G. Hayem.—p. 173.
*Sulphur in Cancerous Liver. A. Robin.—p. 178.
The Reflexes in Epidemic Encephalitis. G. Guillain.—p. 197.
First Case of Contagion of Oriental Sore in France. P. Ravaut. —p. 198.

Experimental Hematology.—Normet reports experiments on rabbits and guinea-pigs after injection of sodium citrate; this allows the study of the blood to be continued in vitro. His illustrations demonstrate, he asserts, the course of the evolution of the blood corpuscle, the mononuclear leukocyte being capable of producing directly or indirectly, as he explains, the eosinophils and the erythrocytes. He regards it as the generator of all the blood cells. The budding or gemmation which he describes as the origin of the hematoblasts, shows a process of cell reproduction which was not suspected in metazoa, and which he is now studying in other tissues besides the blood.

Quadruple Birth.—The woman had borne six normal children when in 1915 she gave birth to two boys and two girls at one time, and all are in good health to date. There was no history of twins in either family before.

Percussion Locates Painful Points in the Abdomen.—Hayem strikes with the middle finger, like a hammer, and has found that this locates the tender points with greater precision than mere pressure alone. Lately he has been using special hammers, with a spring, for the purpose. This hammer technic may reveal points of tenderness which escape detection by ordinary palpation and pressure. The pain elicited is usually visceral, and with dyspepsia, it is generally in the liver. With chronic stomach disease, aside from ulcer and cancer, this *martelage* often elicits pain in the liver and intestine.

Sulphur in the Cancerous Liver.—Robin concludes from his long study of sulphur metabolism in malignant disease that there must be some special proteolytic ferment in the organ or part of the organ in which cancer develops which prepares the soil for the malignant disease. Research in this line may throw light on chemotherapy of cancer. The sulphur content was much below normal in the cancer regions in five cancerous livers examined.

Bulletins de la Société Médicale des Hôpitaux, Paris

Feb. 6, 1920, **44**, No. 5

*Acute Encephalitis in Children. J. Comby.—p. 161.
*Neurofibromatosis with Suprarenal Insufficiency. A. Chauffard and P. Brodin.—p. 166.
*Malaria Masquerading as Paroxysmal Tetany. P. Hébert and M. Bloch.—p. 169.
*Azotemia with Pulsus Alternans. C. Esmein and J. Heitz.—p. 173.
*Epidemic Encephalitis. Harvier and others.—p. 179.
Gangrenous Process in Lung; Recovery under Antigangrene Serotherapy. H. Dufour and others.—p. 190.

Acute Encephalitis in Children.—Comby warns that acute encephalitis is frequent in children but is usually mistaken for tuberculous meningitis until lumbar puncture shows the absence of lymphocytosis. In his twenty-five cases published in 1907 the lethargic type was manifest in about a third of the cases. The encephalitis developed secondary to influenza, whooping cough, vaccination, enteritis or gas poisoning in the majority, but in some the disease seemed to be primary. Some of the children died and some recovered completely, but others were left with grave sequelae.

Neurofibromatosis.—Chauffard and Brodin report a case which apparently confirms the connection between Recklinghausen's disease and the suprarenals. Suprarenal treatment was followed by immediate and notable improvement, as in Pic's and Jullien's two cases.

Malarial Attacks Masquerading as Tetany.—Hébert and Bloch report a case in which attacks of tetany every second day were finally explained by finding *Plasmodium vivax* in the blood. With tetany from any cause, they suggest that it might be well to examine for parasites. The attacks in this case resembled the hemoclastic crises from chilling to which Widal and others have called attention in paroxysmal hemoglobinuria.

Azotemia with Pulsus Alternans.—Esmein and Heitz tabulate the details of twenty-five cases of pulsus alternans showing the high urea content of the blood; it ranged from 0.43 to 1.66 gm. per liter. After the intake of meat was restricted, marked improvement followed. These experiences testify to the importance of putting patients with pulsus alternans on a nitrogen-poor diet in addition to heart tonics and diuretics. The subject is timely, they add, as pulsus alternans seems to be increasing in frequency; forty cases have been encountered by them in the last few years. The possibility of syphilis as a causal factor must not be forgotten. In the discussion that followed, Josué suggested that the azotemia in these cases may have been merely relative, depending on oliguria. The alternating pulse is a sign of weakness of the heart, and this in turn may entail oliguria and secondary azotemia even when the kidneys are sound. Heart tonics may transform the whole clinical picture.

Epidemic Encephalitis.—Netter estimates at 500 the recent cases of lethargic encephalitis at Paris. Other speakers commented on the variety of forms the disease is now assuming, even walking cases. Labbé and Hutinel report a case with lymphocytosis and excessive amounts of glucose in the lumbar puncture fluid. Others report series of cases with delirium and hallucinations. Morax and others discuss the ocular symptoms, and Weil describes a case with symptoms indicating involvement of the spinal cord.

Lyon Médical

April 10, 1920, **129**, No. 7

*Tuberculous Rheumatism. L. Duvernay.—p. 298.

Tuberculous Rheumatism.—Duvernay states that while the existence of tuberculous rheumatism is quite generally recognized, there are many erroneous ideas afloat in regard to the nature of the disease and with respect to its treatment. Many seem to think of tuberculous rheumatism as an articular localization of the Koch bacillus, which Duvernay says is not only still unproved but seems to be in contradiction with almost all the facts. It should therefore be emphasized that tuberculous rheumatism (or inflammatory tuberculosis) presents just ordinary lesions, and that there are no evidences of classic tuberculosis. He regards tuberculous rheumatism as not so much a toxic rheumatism as an antitoxic or reactional rheumatism. It seldom appears when the toxic substances are abundant. The tuberculous rheumatic is one who has recovered from tuberculosis, whose organism is defending itself, and in whom the antibodies are very active and very abundant. Since tuberculous rheumatism is not a local tuberculosis but a rheumatism, it should be treated like other forms of rheumatism: warmth, immobilization during the acute stages but mobilization and massage as early as possible to avoid atrophy and ankylosis.

Presse Médicale, Paris

Feb. 25, 1920, **28**, No. 16

*Angina Pectoris. A. Martinet.—p. 153.
*Bismuth Poisoning. C. D. Constantinescu and A. Joneseu.—p. 155.
Ocular Ataxia in Tabes. A. Cantonnet.—p. 156.

Angina Pectoris.—Martinet seeks for and applies treatment for the anatomic elements responsible in aorta, coronaries and myocardium; for the pathologic physiology in the nerves around the aorta, ischemia in the myocardium, and cardiac insufficiency; for the etiologic elements, syphilis, gout, rheumatism, arteriosclerosis, obesity or neuropathies, and, finally, for the provocative elements, such as overexertion, emotional stress, excesses, meteorism or aerophagia. During a severe attack he injects atropin and morphin in one thigh and camphorated oil in the other, and wraps the chest in a compress wrung out of mustard water, 2 handfuls of mustard in 2 liters of very hot water; covers with oiled silk and keeps it on until the skin is bright red (usually from fifteen to thirty minutes); or the arms can be held in very hot water; when there is danger of acute edema of the lung, blood-letting at the elbow. Besides these and other measures described, he lays great stress on tranquilizing the patient. The anguish and fear maintain or start further spasms of the vessels,

and one of the main points in treatment is to reassure the patient, telling him that the gravity of angina pectoris has been much exaggerated, and that many persons subject to it long survive, with ordinary care. When aerophagia is a prominent element, it is easy to convince the patient that the disturbances are not induced or aggravated by muscular exertion, as a rule. A stimulant might be prescribed, to be carried habitually, a few swallows to be taken when symptoms suggest an impending attack. He usually orders for this "gri-gri," as he calls it, a little ammonium acetate in brandy and syrup.

Severe Bismuth Poisoning.—The bismuth had been given in the case reported for roentgen examination with supposed gastric ulcer. The blood showed nitrites but no trace of bismuth, and the symptoms and spectrum indicated that the oxyhemoglobin had been transformed into reduced hemoglobin and what he calls oxy-azotic hemoglobin.

Annali d'Igiene, Rome

December, 1919, **29**, No. 12

*Pathogenesis of Cholera. G. Sanarelli.—p. 797.
*Sterilization of Drinking Water. D. De Blasi.—p. 842.
Agglutinins for Proteus X in the Serum of Typhus Patients. Levi Della Vida.—p. 847.

Pathogenesis of Cholera.—In this first of a series of articles on this subject Sanarelli describes research on animals to study the natural defences of the peritoneum against the cholera vibriones.

Sterilization of Drinking Water.—Among the chemicals investigated by De Blasi he found silver fluorid most effectual, but it required a comparatively strong solution and contact of an hour to completely sterilize the water. The water is rendered limpid afterward by addition of sodium thiosulphate. Cattle and horses drink water containing up to 1:10,000 of the silver fluorid (*tachiolo*) without reluctance or apparent harm, he adds. His research with sodium hypochlorite and certain other chemicals merely confirms what others have published.

Policlinico, Rome

March 1, 1920, **27**, No. 9

Normal Serum in Treatment of Puerperal Infections. O. Cignozzi.—p. 259.
Verbal Blindness from Skull Wound. E. Fossataro.—p. 261.
Epidemic Encephalitis. G. Pansera.—p. 263.
Specific Color Reaction in Urine in Acute Peritonitis. O. Sgambati.—p. 267.

March 15, 1920, **27**, No. 11

*Medical Treatment of Dysenteric Liver Abscess. L. Manini.—p. 323.
Organic and Functional Anesthesia. G. Dragotti.—p. 327.
Donato Rossetti, 1667, a Pioneer in the Study of the Senses. G. Bilancioni.—p. 338.

Medical Treatment of Dysenteric Liver Abscess.—The symptoms indicated amebic dysentery of several months' standing but no amebas could be cultivated from the stools nor from the thick, chocolate colored fluid obtained by simple puncture of the enlarged right lobe of the liver through the sixth interspace on the axillary line. The liver was not tender and the spleen was not enlarged. Under a vigorous course of subcutaneous injections of emetin, the fever and other symptoms promptly subsided to complete clinical recovery, confirming the presumptive diagnosis, and establishing anew the efficacy of medical treatment alone with amebic liver abscess.

March 22, 1920, **27**, No. 12

*Spasm of Walls of Arteries. E. Morelli.—p. 355.
Vaginal Enucleation of Submucosa Uterine Fibroma. C. R. Belgrano.—p. 358.

Arterial Spasm with Hypertension.—Morelli emphasizes that in estimating the arterial blood pressure it is necessary to take into account the sphygmogram as well as measure the systolic and diastolic pressure. Forlanini regarded essential arteriospasm as a morbid entity, the abnormal irritability of the muscular walls of the arteries an expression of pathologic conditions apart from arteriosclerosis. The sphygmogram may vary widely in persons whose blood pressure measurements show the same figures. De Giovanni noted that after palpation of the radial artery the area palpated remained contracted for a time, testifying to the excitability of the artery walls. Zoja has also called attention to the changes in the sphygmogram when the nerves in the arm above are irritated by stroking them across. Their tests were made on persons with normal blood pressure, but Morelli found the response even more pronounced with high pressure. The spasmodic contraction may be in the medium sized arteries or in the terminal arterioles, or in both. The effect is much like that of arteriosclerosis; the contracted artery may feel as hard and rigid as with sclerosis, but differentiation is extremely important as the treatment for one may be injurious in the other. When the medium arteries alone are contracted, the arterioles below and the circulation suffer, and the arterial pressure from extremely high during systole drops to extremely low during diastole. With this tendency to spasm of the arteries, the tonus of the arteries may respond more rapidly and intensely to stimuli of different kinds than has as yet been demonstrated with normal arteries. The spasm may be total or segmentary, and the type may differ as it occurs during systole or diastole, the increase in the diastolic tonus of the artery preventing the stretching of the artery during the diastole. The combination of spasm of the arteriole with spasm of the larger artery throws much extra work on the heart and essentially disturbs the circulation.

Riforma Medica, Naples

Dec. 20, 1919, **35**, No. 51

*Motor Plastic Operations: Cinematization, Cineplastics and Cineprosthetic Appliances. A. Pellegrini.—p. 1113.
*Pleuritis with Liver Disease. A. Furno.—p. 1122.

Motor Plastic Operations.—Pellegrini here presents the report for 1918 and 1919 of what has been accomplished in Italy in the line of cinematization, cineplastics and cineprosthetic appliances. Among the twenty-one illustrations some show the technic and results of a tunnel made in the place where the shoulder had been enucleated. This tunnel allows a grasp of an instrument and motor control to a certain exent, backed by the strength of the shoulder muscles. The Zerlini artificial hand can be used both with simple motor loops of muscles and alternating loops. Some of the illustrations show a man after amputation of the arm writing with this Zerlini hand, or pouring from a bottle, or holding up a cane-seated chair. The principles and construction of this artificial hand are described and its simplicity emphasized.

Metahepatic Pleurisy.—Furno explains that four fifths of the lymphatics which originate in the liver pass into the pleural cavity above, and line the parietal and visceral sheets of the pleura. These lymphatics are the only ones that enter the pleura from the abdominal cavity, and this readily explains why pleuritis with or without effusion is often an important aid in the diagnosis of liver disease. In none of the other viscera are pathologic conditions accompanied by pleuritis in this way. He relates some cases in which the febrile pleuritis was treated on a mistaken basis for about two years before the causal liver disease was suspected. This mistake is particularly disastrous when the liver disease is of syphilitic origin. Irreparable lesions may become installed as the years pass without proper treatment while attention is focused exclusively on the pleura. Furno knows of six cases at least in which the patients had been sent to a sanatorium for treatment of the supposed tuberculosis. In other cases, operations for gallstones had been done, but on suspicion of a syphilitic origin all recovered promptly under mercury. Pleuritis with chills, fever and night sweats should suggest the liver first of all. The liver is often silent in its pathology, he says, or symptoms from it simulate those from other viscera; right pleuritis may be the first thing to give the clue.

Feb. 21, 1920, **36**, No. 8

Epidemic Encephalitis. A. Chauffard.—p. 197. A. Abbruzzetti.—p. 203. G. Onano.—p. 204.
*Constitutional Anomalies and Syringomyelia. A. Finzi.—p. 199.
*Chilling of the Skin in Relation to Disease of the Respiratory Apparatus. G. Galeotti.—p. 205.

Constitutional Anomalies in Relation to Syringomyelia.—Finzi recalls some cases on record in which four of the five

children in a family or the mother and three children all presented syringomyelia, and states that the twenty-one patients with syringomyelia he has recently examined all presented an unusual number of malformations or other constitutional anomalies. They are so frequent and so universal that a casual coincidence can be excluded. An inherited neuropathic taint is particularly common, and any organ is liable to display the congenital anomalies.

Chilling of the Skin in Relation to Disease of the Respiratory Apparatus.—Galeotti reviews the conflicting theoretical testimony in this line in contrast to the empiric certainty of the pathogenic action on the air passages of chilling of the body. He then describes research by himself, Azzi, Viale and others which demonstrated that the temperature of the expired air does not correspond to the blood temperature, but to the temperature of the skin at the moment. It was found that when the vessels in the skin had become constricted under the influence of cold, the expired air was proportionately cooler, and it grew warmer as the vessels in the skin dilated under the influence of warmth. Their findings can mean only that there is a close nervous connection between the vessels in the skin and the vessels in the air passages. As one system contracts, those in the other contract instantaneously with them, and they dilate in the same way. The temperature of the air in the lungs is determined by the blood in the vessels, and if these vessels contract, the expired air is cooler than when the vessels are dilated. Sudden vasoconstriction in the lungs may favor infection from saprophytes by checking phagocytosis or by the altered metabolism or by the paralytic dilatation which follows the vasoconstriction. The hyperemia in the vessels of the air passages which accompanies hyperemia, from revulsion to the skin, in the vessels of the skin, explains, he says, the benefit from revulsion and fomentations applied to the chest, while the reverse mechanism explains the benefit from ice applied to the skin in arresting hemoptysis. He explains in conclusion that this behavior of the vessels in the air passages seems to be an atavistic functional relic of the primitive thermo-regulating mechanism, analogous to what is observed in dogs.

Deutsches Archiv für klinische Medizin, Leipzig

Sept. 26, 1919, **130**, No. 3-4

*Pituitary Tumors. V. Reichmann.—p. 133.
*Scurvy. R. Bierich.—p. 151.
*Resisting Power of Erythrocytes. J. Bauer and B. Aschner.—p. 172.
*Osteo-Arthropathy (Marie). V. Hoffmann.—p. 201.
*Heart Action During Sleep. F. Klewitz.—p. 212.
*Test Pressure on the Vagus. Margarete Kleemann.—p. 221.
Influence of Great Cardiac Nerve on Shape of the Electrocardiogram in Case of Paroxysmal Tachycardia. Boden.—p. 249.
Pigment Cells in Kidneys and in Urine. J. Weicksel.—p. 260.
Twenty-Four Years of Diphtheria at Bonn. J. L. Noest.—p. 270.

Pituitary Tumors with Unusual Clinical Picture.—Reichmann reports two cases in which the symptoms had suggested exophthalmic goiter, tendency to acromegaly, suprarenal disease, and disease of the genital glands, but necropsy revealed in the woman of 36 an eosinophil adenoma in the pituitary, and in the man of 51 the roentgen findings seem to indicate a similar tumor. The face was red and puffy in both; the exophthalmos was pronounced but the thyroid was not enlarged, and the pulse was slow, with extreme weakness of muscles, emaciation, edema of the legs, slight glycosuria, no albuminuria, and no signs of contracted kidney, but the blood pressure was very high, and there was pronounced osteoporosis of the spine. The symptoms thus indicated excessive functioning of the pituitary and suprarenals, with thyroid deficiency. The curvature of the spine from the osteoporosis was evidently responsible for the severe neuralgiform pains in the back in the woman's case. Tests for epinephrin in her blood were negative, but the blood pressure of 200 mm. mercury pointed to the suprarenals, and as the pains in the back were unbearable, Reichmann yielded to the patient's demand for operative relief, and removed the left suparenal. The woman died nine days later from peritonitis, nearly three years from the first onset of symptoms, which had been edema of the legs, exophthalmos and arrest of menstruation. The latter had never been constantly regular.

Scurvy.—Bierich as chief of the Russian Red Cross central scurvy station was able to compile data in regard to 1,343 cases with necropsy findings in six cases. He says that before the outbreak of the revolution in Russia, fully 98 per cent. of the scurvy patients were promptly cured by the usual antiscurvy diet, but after the onset of the revolution only from 20 to 30 per cent. could be cured although the men's food was much better. There were whole divisions of troops in which 75 per cent. developed scurvy. These and other facts observed testify, he says, that the endogenous factors in the disease are racial and mental; the exogenous are the deficient diet. The injury seems to affect primarily the endothelium of the capillaries, the normal structure of which is reversibly injured by the lack of some nitrogen-containing building-stone indispensable for its specific function. The insufficiency of the blood-producing organs seems to be secondary to this structural damage to the capillaries. Treatment in many of his cases had to include psychotherapy, transfusion of citrated blood and splints, in addition to the usual dietetic measures.

The Range of Resisting Power of the Erythrocytes.—Bauer and Aschner recall that sometimes the concentration of the substance causing the first sign of laking may be very close to the concentration causing total hemolysis. In other cases there may be a wide range between them. This "resistance range" is the expression of the biologic difference between erythrocytes which from other standpoints seem to be identical in every respect. They found the widest range in severe anemia, especially the anemia with chronic Bright's disease; the smallest range was in tuberculosis with a mild course, and injections of tuberculin seemed to increase the resisting power of the erythrocytes. They tested with solutions of sodium chlorid ranging from 0.6 per cent. to 0.3 per cent., drawing the blood first into a solution of 0.28 parts potassium oxalate and 0.8 parts sodium chlorid in 100 parts distilled water and centrifuging, then making the suspension of the erythrocytes in 0.9 per cent. sodium chlorid solution. The set of test tubes was compared with a colorimeter scale (hemoglobin solution). The younger erythrocytes were the more resistant. The resistance range varied in the same person at different times in their tests of 100 persons. The findings are tabulated and a theoretical explanation tentatively advanced.

Hypertrophic Pulmonary Osteo-Arthropathy.—In Hoffmann's first case the woman of 40 developed drumstick fingers and thickening of the periosteum of different bones about six months after the clinical cure of uterine cancer under mesothorium treatment. A year after the development of the typical *ostéoarthropathic hypertrophiante pneumique*, pains and ataxia in the legs testified to neuritis. Shadows in the lungs seem to be metastases of the cancer, but they have not progressed during the year the woman has been under observation. In a second case, in a man of 30, the osteo-arthropathy was secondary to bronchiectasia with foci of gangrene. No instance of primary osteo-arthropathy of this Marie type has yet come to necropsy, to Hoffmann's knowledge. He remarks that the relations between the primary form and the secondary toxigenous form are not at all certain.

The Heart Action During Sleep.—Klewitz has been taking electrocardiograms of twenty-five persons during sleep, including a number of healthy subjects, eight with well compensated valvular disease, three with failing compensation and two with tachycardia or bradycardia after influenza. The electrocardiogram in sleep often differed materially from the electrocardiogram of the same subject awake. In the healthy, the heart cycle was lengthened, sometimes up to one tenth. The ventricle systole was prolonged more in proportion than the auricle systole. The differences in heart action during sleep are advantageous for the circulation as a whole. With the different forms of heart disease no regularity in the sleep changes could be detected. In the one case of bradycardia the heart cycle was shortened.

Test Pressure on the Vagus.—Kleemann applied to 127 patients Czermak's test pressure on the vagus, and the response was studied with electrocardiography. In 80 of

150 tests of the right vagus no effect was apparent, as also in 90 of 149 tests of the left vagus As a rule, pronounced modification from the pressure was evident only in cases of heart disease, but the intensity of the response was not proportional to the severity of the latter, and a positive response did not always occur with heart disease. The findings were interesting with partial heart block, namely, its aggravation, and the development of a regular auricle-ventricle rhythm while the rate of sinus conduction was reduced.

Deutsche medizinische Wochenschrift, Berlin

Dec. 25, 1919, **45**, No. 52

Observations on Heart Function and the Effect of Digitalis. S. Loewe.—p. 1433.
Orthopedic Therapy in Foot Deformities with Neural, Progressive Muscular Atrophy. H. Debrunner.—p. 1437.
The Friedmann Tuberculosis Remedy in Tuberculous Bone and Joint Lesions. J. Elsner.—p. 1438. Conc'n.
My Experiences with Silver Salvarsan. Levy-Lenz.—p. 1440.
Protective Sleeve for Obstetrical Use. K. Meyer.—p. 1441.
Reasons Why the Eight Hour Law Is Not Applicable to Hospitals. E. Unger.—p. 1441.
The Place of Philosophy in the Study of Medicine. B. Jung.—p. 1442.

March 18, 1920, **46**, No. 12

*Surgical Treatment of Nephritis. H. Kümmell.—p. 313. Conc'n.
*Antityphoid Vaccination of Civilian Population. J. Basten.—p. 316.
Effect of Food Restrictions on Mortality. M. Hindhede.—p. 318; Reply. Rubner.—p. 320.
Gastric Antiperistalsis. O. Strauss.—p. 321.
*Medicolegal Significance of Vagus Pressure Experiment. Von Teubern. —p. 322.
*Splenic Anemia in Young Children. Aschenheim.—p. 323.
*Treatment of Prolapse of Rectum in Children. P. G. Plenz.—p. 324.
Diphtheria of the Umbilicus in the Newborn. F. Göppert.—p. 324.
Dermatologic Hints for Practitioners. M. Joseph.—p. 325. Conc'n.
Questionnaire on Treatment in Influenza. J. Schwalbe.—p. 326.

Results of Surgical Treatment of Nephritis Under War and Peace Conditions.—Kümmell holds that acute nephritis with abscesses should be treated by means of nephrotomy or decapsulation as soon as the diagnosis has been definitely made, as he has found the results very favorable. The form of chronic nephritis whose predominant symptom is pain in the kidney (mostly unilateral), nephritis dolorosa, is favorably influenced by decapsulation, and the patients remain free from symptoms, able to work and to all appearances perfectly well. In the case of unilateral partial nephritis, if internal treatment fails to give relief, operative intervention should not be postponed too long, lest the diseased area should increase or the other kidney should become involved. Chronic hemorrhagic nephritis, whose predominant symptom is hemorrhage, more or less profuse, usually unilateral, and which often simulates the presence of tumors, reacts most favorably to decapsulation. The hemorrhages almost always cease and seldom reappear. The patients remain free from symptoms for long periods and are able to work.

Compulsory Antityphoid Vaccination of Civilian Population.—Basten has investigated the results of the extensive vaccination of civilians against typhoid undertaken by the British army in December, 1918, during the occupation of German territory. Civilians between the ages of 6 and 45 were compelled in certain districts during a typhoid epidemic to accept vaccination unless there were certain contraindications, such as advanced pregnancy, recent childbirth, advanced tuberculosis, etc. Basten draws these conclusions from his investigations: 1. The vaccination was accomplished without any injury to the health of any age group. 2. No unfavorable influence on pregnancy or on lactation in nursing mothers could be noted. 3. The English vaccine, which contained also paratyphoid A and B strains, did not cause more severe reactions than the German vaccine which contained only typhoid strains. 4. The vaccination checked successfully many cases of typhoid that were in the incubation stage and thus rid the population of the infection. 5. No influence from the vaccination on the typhoid morbidity percentage among the vaccinated as compared with the unvaccinated, during the following six months, could be noted, but the vaccination attenuated the disease in the typhoid patients who were vaccinated. Conclusion 5 would seem to indicate that two injections as given are not sufficient to immunize against the disease, and that three injections are necessary. The experience of the German army has been that three injections are required to establish immunity.

The Medicolegal Significance of the Vagus Pressure Experiment.—Von Teubern states that the Czermak vagus pressure experiment has a certain medicolegal value as it lends support to the view that in persons with a strongly positive vagus response a more or less intensive compression of the throat for even a short space of time, as in choking, attempts to strangle, etc., might be alone sufficient to produce immediate arrest of the heart action.

Splenic Anemia in Young Children.—Aschenheim opposes the tendency to regard splenic anemia as belonging to a subordinate group of the ordinary anemias in infants and young children, and defends the view that it is a clearly defined disease, characterized by a very large spleen, a yellow color of the skin, swelling of the liver, and frequent edemas and hemorrages.

Treatment of Prolapse of the Rectum in Children.—Plenz opposes the use of the subcutaneous wire ring as recommended by Thiersch in the treatment of prolapse of the rectum in children. It produces severe pain during later defecation and, acting as a foreign body, it leads almost invariably to suppuration and the formation of abscesses. He expresses surprise that since Kirschner called attention to the excellent results obtainable with fascia, so little use has been made of the suggestion. Plenz has used the fascia method in place of the wire ring in six cases, and has been well pleased with the results.

Deutsche Zeitschrift für Chirurgie, Leipzig

November, 1919, **151**, No. 5-6

*Autovaccines Against Pyogenic Infection. Läwen and Hesse.—p. 289.
*Wax and Paraffin to Plug Cavities in Bones. O. Wassertrüdinger. —p. 319.
*Arteriovenous Aneurysms. M. zur Verth.—p. 333.
Movements of Knee with Injury of Anterior Crucial Ligament. M. Budde.—p. 343.
*Intravenous Infusion by the Drop Method. M. Friedemann.—p. 352.
*High Sacral Anesthesia. D. Schuster.—p. 393.
Congenital Lumbosacral Scoliosis. M. Budde.—p. 417.

Preventive Vaccination Against Infection.—The experience was with war wounds, but the number of cases (twenty) is too small for definite conclusions. In three of the men the wound became infected. There was no temperature or pulse reaction to the injection of the autovaccine.

Plugging Cavities in Bones.—Roentgenograms are given of seven cases—all war wounds—in which the injected wax or hard paraffin seemed to stimulate the tissues to repair. The foreign substance was expelled as the cavity healed up behind it. In only one of the cases was healing by primary intention realized; the others were suppurating, but they began to expel the foreign substance by the third or fourth week, and the large defect gradually healed up completely, with very little impairment of function. To hasten the healing, in some of the cases the displaced wax was removed.

Arteriovenous Aneurysm.—Zur Verth presents evidence to show the serious damage to the general circulation, liable to result from an arteriovenous aneurysm of large vessels. The heart enlarges and may show signs of weakness, while both heart and vessels are more susceptible to reflex influences.

Intravenous Infusion by the Drop Method.—Friedemann has been applying this method of infusion for seven years, and his experience in several hundreds of cases has proved extremely satisfactory, he says. As the action of epinephrin is fleeting, this continuous drop method is particularly advantageous on this account. He generally uses a 0.9 per cent. solution of sodium chlorid or Ringer's solution, adding epinephrin, glucose or digitalis as may be indicated. A sign that the patient is beginning to get too much fluid is an increased lacrimal secretion or slight edema of the eyelids. On account of the danger of hypostatic pneumonia, he is careful not to infuse too much fluid when there seems to be a predisposition to this. He has never had any case of